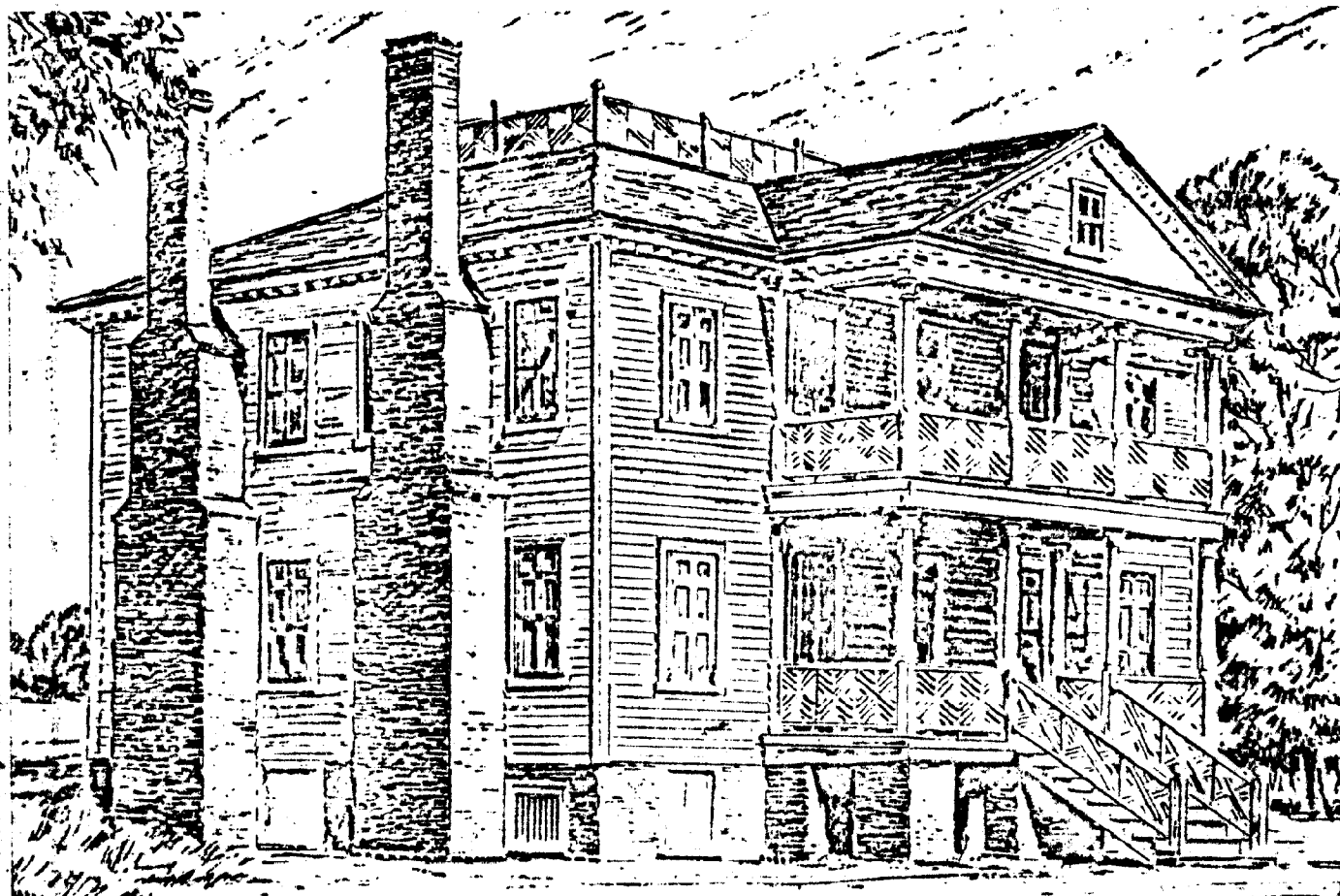


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COASTAL ZONE
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WINDSOR, N.C.



LAND DEVELOPMENT PLAN

N.C. COASTAL RESOURCES COMMISSION
P.L. 94-420, L36, 1976

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COASTAL AREA MANAGEMENT ACT
1976

COASTAL ZONE
INFORMATION CENTER

LAND DEVELOPMENT PLAN

AS
MANDATED
BY

THE COASTAL AREA MANAGEMENT ACT
OF 1974

TOWN OF WINDSOR

MAY 21, 1976

N.C. COASTAL RESOURCES COMMISSION

LAND DEVELOPMENT PLAN

Windsor, North Carolina

May 21, 1976

Prepared By

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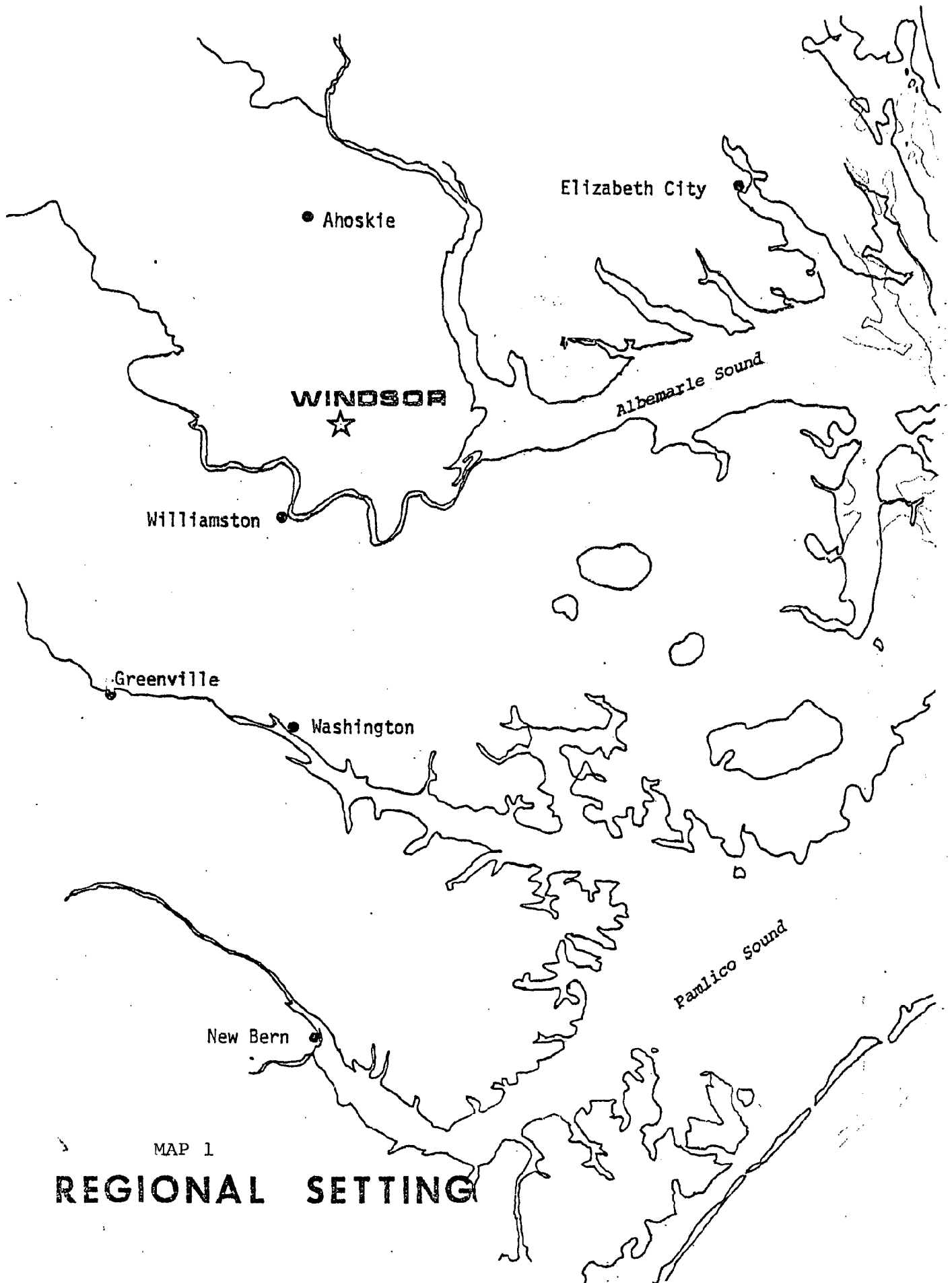
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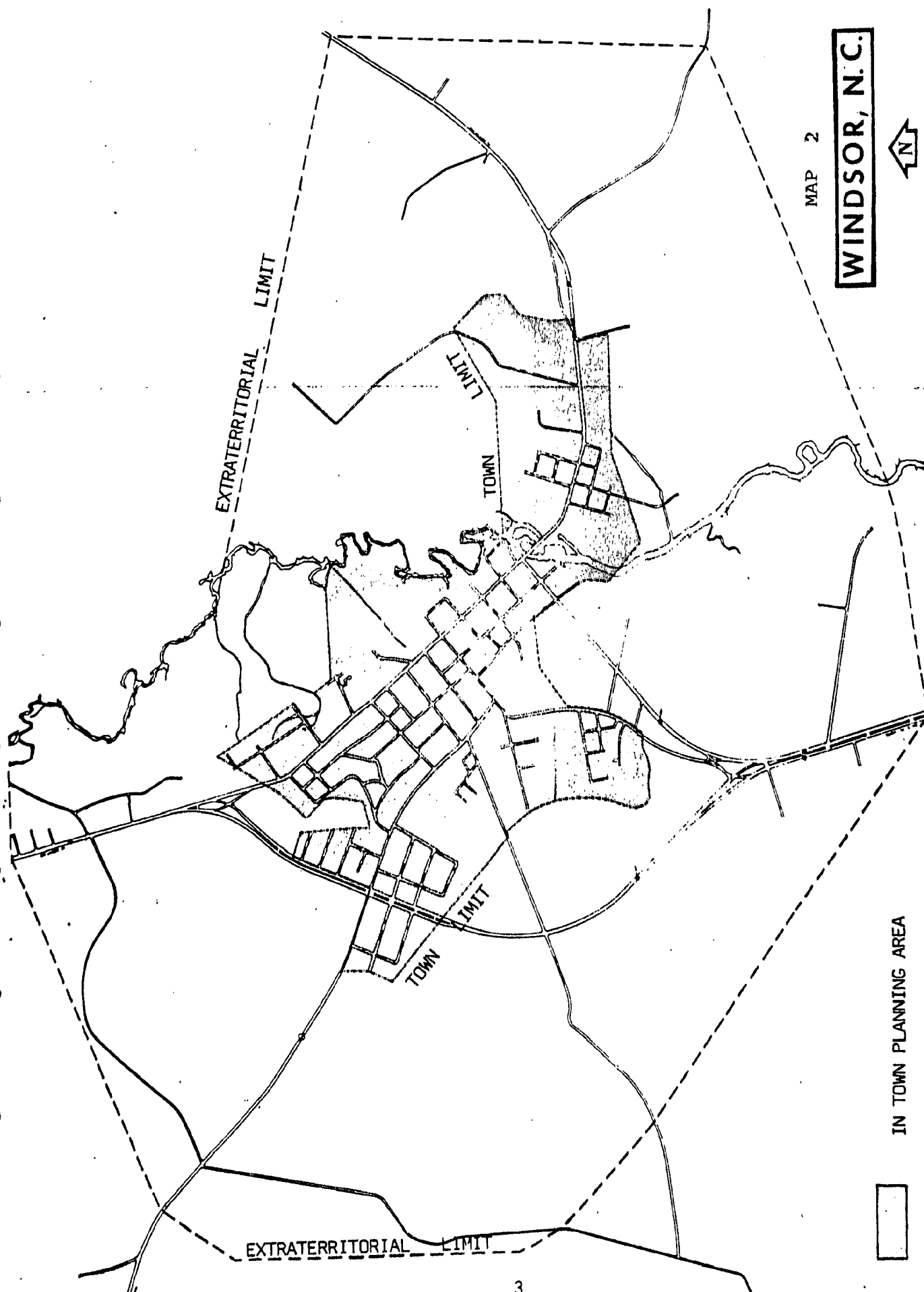
MAP 1
REGIONAL SETTING

INTRODUCTION

SECTION ONE



PLANNING AREA



IN TOWN PLANNING AREA

EXTRATERRITORIAL PLANNING AREA

PURPOSE OF THE PLAN

"The coastal area of North Carolina is one of the most important regions... for food production, future expansion of commerce, industry and recreation. To enable orderly growth and protection of important natural resources of this area, the 1974 General Assembly passed the Coastal Area Management Act."¹

This state law requires all local government in Coastal North Carolina counties and towns to develop a land use plan (blueprints) for their future growth. This Land Use Plan is the official guide for the future development of Windsor and its extraterritorial jurisdiction. The Plan allocates various uses of land to specific areas so as to correct inadequacies in past land development patterns and to assure appropriately related future development.

In order to accomplish the goals and objectives of this Plan, future development of physical facilities must be based on this plan. Functional plans such as those for water and sewage facilities, parks and open spaces, transportation, and public buildings should follow directly the guidelines set forth in the Land Use Plan.

To accomplish the goals and objectives of this Plan, the adoption of implementation programs is a necessity. Legal tools such as Zoning Ordinances and Subdivision Regulations will adhere to the Plan. Also, capital improvement programs as well as short and long-range financial plans should serve to carry out plan objectives.

Utilization of this Land Use Plan, functional plans, and financial programs as a comprehensive approach to development, redevelopment, and the provision of

¹ N.C. Agricultural Extension Service and N.C. Department of Natural and Economic Resources, Coastal Area Management: A New Look on the Horizon, Misc. Ext. Publication No. 131 (Raleigh: N.C. Agricultural Extension, 1974), p. 1.

services will result in more cost effective use of public funds and a higher quality of life for community residents.

GENERAL APPROACH

This plan assesses present land use patterns and problems within the Study Area and sets forth objectives and recommendations for alleviating those problems. It analyzes possible future land development problems and needs, and recommends procedures for avoiding problems and meeting the needs of the future population. Most importantly, this document provides a policy guide for use by the Planning Board, the Town Administrator, and Town Commission for making day-to-day decisions bearing on land development and services.

STUDY AREA, DEFINED

Throughout this Plan, reference will be made to the Study Area or the Windsor Planning Area. However, in some instances, due to data limitations, references will be made to Windsor Township and/or Bertie County. This Study Area consists of the Town of Windsor and its extraterritorial zoning jurisdiction. The Windsor Town Commission has legal authority to guide future growth and development through the administration of a zoning ordinance and subdivision regulations, as well as through extension of municipal services. Thus, this Land Use Plan considers the land area contiguous to the Town, since some new development is projected to occur there due to its undeveloped character. Map Two, depicts the Study Area boundaries.

AUTHORITY TO PLAN

North Carolina CODE, Part 1 of Article 19, provides the enabling legislation for the cities and towns within the State to create or designate one or more planning agencies. In part, Section 160A-361 of Article 19 states:

"Any city may by ordinance create or designate one or more agencies to perform the following duties:

- (1) Make studies of the area within its jurisdiction and surrounding areas;
- (2) Determine objectives to be sought in the development of the study area;
- (3) Prepare and adopt plans for achieving these objectives;
- (4) Develop and recommend policies, ordinances, administrative procedures, and other means for carrying out plans in a coordinated and efficient manner;
- (5) Advise the council concerning the use and amendment of means for carrying out the plans;
- (6) Exercise any functions in the administration and enforcement of various means for carrying out plans that the council may direct;
- (7) Perform any other related duties that the council may direct..."

Article 19 further provides that the planning agency may prepare a zoning plan, including both text and maps showing the various zoning districts. Pursuant to Section 160A-383 of that same Article, those zoning regulations are to be made in accordance with a comprehensive plan and designed to lessen street congestion, to secure safety from fire, panic, and other dangers; to promote health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentrations of populations; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements.

METHODOLOGY

This land use plan is divided into ten major sections. SECTION ONE, the Introduction, is designed to provide the reader with a general historic and geographic description of the Windsor Planning Area. SECTION TWO is a description of

present conditions in the area. It contains background data on the physical, urban, and built-up characteristics of the environment. As with any formal planning document, the existing development patterns must be analyzed prior to a discussion of future development. SECTION THREE consists of public participation activities. These activities are discussed in the context of citizen identified major land use issues and problems. The discussion of land use development constraints constitutes the FOURTH SECTION. SECTION FIVE addresses estimated population and economic demands. Future land needs and community facilities demands are included. SECTION SIX is the plan description which discusses the land classification system. Areas of environmental concern are addressed in SECTION SEVEN. SECTION EIGHT is designed to summarize the content of the plan with statements of major conclusions. SECTION NINE defines the town-county relationship. The TENTH and final section is the Appendixes. It contains a housing inventory and analysis, and a description of the "Class C" Stream Classification System.

As mentioned previously, an analysis of certain background data is essential to an understanding of the recommendations and policy statements set forth herein. Geographic, demographic, and economic data are necessary components of background materials, as are data concerning the present land use and development pattern. The data originated from a variety of sources. Demographic and economic information was compiled from the United States Census of Population, and several regional plans and documents. In addition, the recommendations of the Plan have been coordinated with the plans of the Mid-East Commission, the regional planning agency for Bertie County, and Bertie County Land Use Plan to insure that conflicts do not arise among these documents.

In mapping the existing land uses in the Windsor Area, a modification of the conventional land use categories was used. "These categories are generalized and are designed to be compatible with those suggested by the U.S. Department of Interior."² The land use categories used are as follows:

A. URBAN AND BUILT-UP

1. Residential
2. Commercial
3. Industrial
4. Communication and Utilities
5. Government and Institutional
6. Cultural, Entertainment, and Recreation
7. Barren

B. AGRICULTURE

C. FORESTLAND

D. WATER

The residential category includes all single-family, multi-family, mobile homes, and mobile home courts;

Commercial and business includes all private activities which function to make a profit by the sale of goods and services.

Industrial category includes manufacturing firms as well as industrial firms;

Communication and Utilities includes public utility substations such as water and sewer, telephone substations, etc.

Government and Institutional includes public and semi-public buildings, such as post offices, courthouses, fire stations, churches, town hall, public schools, and all cemeteries;

Cultural, Entertainment, and Recreation classification includes any publicly owned area, providing facilities for swimming, picnicking, hunting, fishing, camping, boating, or other recreational, cultural and entertainment activities;

²State Guidelines for Local Planning in the Coastal Area Under the Coastal Area Management Act of 1974 (G.S. 113A-107(e), 1975), p. 27.

Barren includes all vacant and undeveloped lots, and parcels of land:

Agricultural consists primarily of rural small and large farm lands;

Forestland mainly consists of productive wooded lands; and Water consists of surface bodies of water such as rivers, lakes, streams, etc.

HISTORICAL SETTING

Present day Windsor was invisioned by William Gray. In 1768 Gray donated 100 acres of land for a town site, then called Gray's Landing. The area soon became the center of commerce serving as a navigation point for barges and passenger boats from the Albemarle Sound. Business reached as far as the West Indies via Hatteras Inlet.³

The Colonial Assembly met in December, 1767 and on January 8, 1768, the Assembly passed an act "to create New Windsor on the Cashie River." Cullen Pollock, David Standley and Thomas Ballard were appointed the town's first commissioners. Mainly, they were charged the responsibility of selling lots. In 1817, the North Carolina General Assembly acted to incorporate the Town granting the Town Commissioners additional administrative powers.

The Cashie River, the principal mode of travel, was important to Windsor's commerce and remained until the latter 19th century. "Only coming of the railroad in 1889 diminished and finally, in 1933, killed off this waterborne traffic."⁴

³Bill Sharpe, A New Geography of North Carolina, Vol. IV, (Raleigh, NC: Sharpe Publishing Company, Inc., 1965), p. 173.

⁴Ibid.

Today, Windsor, a town of 2,300 and the Bertie County Seat, still maintains its status as the center of county social, cultural and political activities.

As with most American towns, the availability of some mode of transportation was the single most important factor leading to initial urban development of Windsor. A basic pattern of east to west and south to north has continually played a dominant role in the development of Windsor, beginning with the early plank roads, railroads, river traffic and continuing with hard surfaced roads. The expansion of U.S. Highway 17 and 13 are recent developments to this pattern.

GEOGRAPHICAL SETTING

The Town of Windsor is located within Bertie County in the North Central Coastal Plain of North Carolina. The town is approximately 1.2 square miles with the total study area being approximately 7.9 square miles. Approximately twenty-six (26) miles north is Ahoskie, and Williamston lies about fourteen (14) miles to the south. (See Map 1)

The Cashie River runs through the study area from its northern to its southern boundary. For the most part, the area is drained by the Cashie.

The study area's average mean temperatures range from 43⁰ in January to 79⁰ in July. The annual mean temperature is 60.9⁰. Normally, summer temperatures do not exceed 80⁰, nor do winters seldom fall below 40⁰F, but extremes of 103⁰ and -1⁰F have been recorded.⁵

Precipitation in the study area ranges from 3.69 inches in January to 3.04 inches in December, with 48.52 inches annually. However, this year's rains may exceed existing records. In general, precipitation has been fairly evenly distributed throughout the year with most months averaging about four (4) inches.

⁵National Climatic Center, Asheville, NC, "Monthly Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1941-70", No. 81 (U.S. Dept. of Commerce, 1973).

Snowfall is usually light and seldom covers the ground for long durations. The average length of freeze-free growing season in the area is approximately 212 days. The average date of last occurrence in fall is about November 4.

DESCRIPTION OF PRESENT CONDITIONS

SECTION TWO

POPULATION TRENDS

The 1970 Census figures indicate that Windsor contained 2,199 people, an increase of 386 people since 1960. This growth is particularly significant since it occurred at a time when Windsor Township and Bertie County had population percent changes of -10.9 and -21.2 percent, respectively. Consolidation and annexation were the factors contributing to Windsor's increase in population. On July 1, 1961, Bertie and Windsor towns consolidated and designated as Windsor Town. Also, Windsor Town annexed into Windsor Township. Consolidation of Bertie Town increased the population by some 303, bringing Windsor Town's total population to 2,116 in 1961. Subsequently, annexations have occurred but no significant population changes have been involved. An estimated 70 people were involved in annexations of Spruill's Garden in 1966 and Northboro in 1970. Yet, it is interesting to note that approximately 96 percent of the population increase from 1960 to 1970 can be attributed to annexations and consolidations of Bertie and Windsor towns. Natural increase accounted to only thirteen individuals. Also, Table 1 shows the population trend of Bertie County and Windsor over the past three decades. The percent of Bertie County residing in Windsor has risen from 6.6 percent (1940) to 10.7 percent (1970). This suggests an inward migration of people from rural areas to small towns. Compared nationally, a recent study by the Department of Agriculture revealed that more people are migrating to the country.⁶ If continued, this exodus along with inward migration will place additional service demands on both the town and county.

⁶"More People Migrating to the Country", The News and Observer, 21 April 1975, p. 1.

Table 2 shows Windsor's population distribution change by age groups from 1960 to 1970. The largest percent changes, 51.2 and 50.2, occurred in the 15 to 24 and 55 to 64 age bracket, respectively. A negative percent change (-12.6) has occurred in the under 5 years of age bracket while the lowest positive percent change has occurred in the 25 to 34 years of age bracket.

The birth rate was higher for males than for females in Windsor as was the pattern for most of the United States. This resulted in more males in the town and county from birth to 10 years of age. Migration was not a factor reflecting this change. Nevertheless, the increased male population was somewhat less than at birth because of the higher death rate for males than for females. After 14 years of age, a change occurred. The proportion of females in the young adult ages, as well as at later ages, was somewhat greater than that of males. It can be assumed that death rates were higher for men and more out-migration of males in this labor productive age bracket. Thus, after age 14, females were predominant in numbers in all age groups. This ratio of women was indicated by the sex ratio of 85:100 in Windsor, and 91.8:100 in Bertie County, meaning there were 85.2 males per 100 females in Windsor and 91.8 males to 100 females in Bertie County in 1970. Table 3 shows that there has been a slight decrease indicating a proportionately greater loss of male population in age group 15-44 in Windsor.

Significant changes in the elderly population has occurred over the past decade. These changes are apparently of a national trend. Better medical and health facilities, less demanding life styles are some of the probable contributors in this phenomenon. (see Tables 4 and 5).

During the 1960-1970 decade, Bertie County and Windsor Township encountered percent changes of 97.8 and 91.4 respectively in the 65 and older population.

This represents a 274 percent change, from 77 in 1960 to 288 in 1970. The elderly population will continue to increase and therefore must be a vital part of all planning activities.

Non-whites have been leaving Bertie County and Windsor Township in proportionately greater numbers than the white population; however, in town the number remains constant, 642. Over the ten year period reflexed in Table 6, the non-white portion of the population in Bertie County dropped by 838 from 14,453 to 11,615 while the white population dropped 984 in number. As a result of these declining trends, the total non-white population represents 56.5 percent of the aggregate population in 1970 as compared to 59.3 percent in 1960. Similarly, the non-white population in Windsor Township dropped by 846 from 3,582 to 2,736 while the white population dropped 112 in number. This has resulted in the total non-white population representing 44.5 percent of the total population in 1970 as compared to 51.9 percent in 1960. Table 7 shows the population distribution change by age group and race in Windsor.

In summary, Windsor experienced moderate growth during the 1960-70 decade due to consolidation and annexation of several areas. In keeping with national trends, the most significant change has occurred in the elderly population.

EDUCATION

Windsor does not have a town operated school system. Education is sought through the Bertie County Public School System. Since graduates of the Bertie school system will be competing with other graduates from throughout the region, a comparative analysis can be the most enlightening procedure. Table 8 summarizes a variety of data for Bertie, Hertford, Martin, Pitt and Beaufort counties (these five counties constitute North Carolina's Region Q).

Of the five counties surveyed, Bertie had:

- + second highest percentage of 5-6 year old persons enrolled in school
- + second highest percentage of 7-13 year old persons enrolled in school
- + second highest percentage of 18-19 year old persons enrolled in school
- the lowest percentage of 3-4 year old persons enrolled in school
- the lowest percentage of 20-24 year old persons enrolled in school
- the lowest percentage of 25-34 year old persons enrolled in school
- the lowest median school years completed by both males and females
- the lowest percentage of high school graduates both male and female
- the lowest percentage of males and females with one or more years of college

ECONOMIC TRENDS

An analysis of an area's economy can be a helpful tool in land use planning for shifts in local economics can result in shifts in land use demands. Economic analysis can be accomplished in one of several methods which vary considerably in sophistication based primarily on the availability of economic data to analyze.

There are several information categories which are necessary in order to accurately identify the economy of a community. The most fundamental of these are the division of employment into categorical type, per capita and family incomes, retail sales figures, information about resource availability and utilization as an indicator of growth potential, and commuting patterns of the labor force.

With the aforementioned information a distinction between an area's two economic activities, basic versus non-basic, can be made.⁷ The rationale behind making this distinction is that exported goods and services introduce outside income into the area which induces multiplier effects in the supporting sector to further increase total area income. It is thus necessary to compare the basic/non-basic employment ratio in order to obtain indications of the potential for further economic growth. Briefly, a high proportion of basic activities to non-basic activities generally indicates the potential for additional economic growth, particularly in the non-basic sector. Similarly, an increase in the ratio of basic to total employment may indicate the beginning of a new growth cycle, while a decrease in the ratio may indicate the leveling off of a previously high growth cycle. Generally the national trend is for greater growth in the non-basic sector as income levels rise. Also, this trend is usually downward as areas are urbanized and the levels of services demanded increase.

As explained in the Introduction, this Plan will primarily concern itself with the Town of Windsor and its extraterritorial jurisdiction. As such, the following discussion of area economics will be presented mainly for Windsor Township due to the fact that no data for the extraterritorial area alone exist and due to economic data availability on towns less than 2500 in population. It is recommended and suggested that the data presented herewith be reviewed in the context of the Bertie County Land Use Plan. Traditionally, one way of measuring the economic condition of an area is to compare its economy with that of a larger area such as the county.

⁷For purposes of this report, basic economic activities are defined as those which sell goods or services outside the area thus injecting income into the area as a result of these exports; non-basic economic activities are herein defined as those which produce goods or services primarily for consumption within the area under consideration.

Windsor's geographic location has been a prime factor in influencing the town's economy. Since the town is in a predominately rural area, it is understandable that the local basic economic activities revolve predominately around farming and forestry, and to a lesser extent, manufacturing. Apparently, retail and wholesale trade and other personal services constitute non-basic activities.

Due to existing data limitations, it is impossible to categorize local employment into either basic or non-basic. However, the employment figures in Table 9 do provide limited indications of economic activities in the Windsor Area. Table 9 shows that the major employers in the Windsor Planning Area are involved in activities which do provide outside income and are, thus, predominately basic activities. Employment is dominated by Bertie Industries and Blue Bell which employ 17 and 31 percent of the total employment of the firms located within the Windsor Planning Area.

Tables 10 and 11 provide rough indications of employment in Windsor Township in 1970. These tables put into perspective major employment categories in the area and thus, give some indication of economic activities.

Table 12 reveals travel expenditures in Bertie County in recent years. Again, while not applicable per se to the STUDY AREA, they do provide a rough indication of relative importance of activity in the area.

Income and poverty levels will dramatically aid in illustrating the economic well-being of the area. Perhaps the most meaningful economic statistical information available relates to incomes. Incomes provide crude measures of overall welfare and prosperity. Generally, the standard of living increases with personal incomes. The State of North Carolina rates low nationally in family and per capita incomes.

Table 13 indicates the number of families by poverty status and public assistance in Windsor Township as of 1970. Due to the recent inflation and economic conditions the figures in Table 13 may be low.

Analysis of Table 14 reveals that over fifty (50) percent of the families in Windsor Township earn less than \$6,000 annually.⁸ In 1969, the U.S. Census reported a \$1,875 per capita income for the Town of Windsor.

⁸Family income includes incomes of all members 14 years and over in each family; Per capita income is the mean income computed for every man, woman and child in a particular group. It is derived by dividing the total income of a particular group by the total population (including patients or inmates in institutional quarters) in that group.

TABLE 1

POPULATION TRENDS
BERTIE COUNTY AND WINDSOR TOWN
1940 - 1970

<u>Year</u>	<u>County</u>	<u>Town</u>	<u>Percent of Bertie County Residing in Windsor</u>
1940	26,201	1747	6.6
1950	26,439	1781	6.7
1960	24,350	1813	7.4
1970	20,528	2199	10.7

SOURCE: U.S. Census of Population, 1960 and 1970.

TABLE 2

POPULATION DISTRIBUTION
CHANGE BY AGE GROUPS
1960 and 1970

<u>Age Group</u>	<u>1960</u>	<u>1970</u>	<u>Number</u>	<u>Change: 1960 - 1970</u>
				<u>Percent</u>
Under 5 yrs.	174	152	- 22	-12.6
5 to 14 yrs.	338	406	68	20.1
15 to 24 yrs.	205	310	105	51.2
25 to 34 yrs.	213	220	7	3.2
35 to 44 yrs.	240	259	19	7.9
45 to 54 yrs.	232	298	66	28.4
55 to 64 yrs.	177	266	89	50.2
65 and Over	234	288	54	23.0

SOURCE: U.S. Census of Population, 1960; First Count Summary Tapes, 1970.

TABLE 3

SEX RATIO¹
Windsor, Bertie County and State
1960 - 1970

Age	Males Per 100 Females Windsor		Males Per 100 Females Bertie County		Males Per 100 Females North Carolina	
	1960	1970	1960	1970	1960	1970
All Ages	85.1	85.2	97.3	91.8	97.3	95.9
Under 14	100.0	105.1	104.2	100.9	102.9	103.8
15 - 24	100.9	87.8	101.7	96.0	104.3	106.2
25 - 44	87.1	76.7	92.0	85.2	94.8	94.8
45 - 64	84.2	90.5	94.3	89.9	91.2	89.3
65 and Over	49.0	57.3	80.4	76.8	75.5	70.2

$$^1 \text{Sex Ratio} = \frac{\text{Males}}{\text{Females}} \times 100$$

SOURCE: U.S. Census of Population, 1960 and 1970.

TABLE 4

POPULATION BY AGE AND SEX
Windsor
1970

<u>Age Group</u>	<u>All</u>	<u>Males</u>	<u>Females</u>
Under 5 years	152	74	78
5 - 14 years	406	212	194
15 - 24 years	310	145	165
25 - 34 years	220	101	119
35 - 44 years	259	107	152
45 - 54 years	298	146	152
55 - 64 years	266	122	144
65 + Years	288	105	183

SOURCE: U.S. Census of Population, First Count Summary Tapes, 1970.

TABLE 5

ELDERLY POPULATION
PERSONS 65 YEARS OLD AND OVER
BERTIE COUNTY, WINDSOR TOWNSHIP
and TOWN

1960 and 1970

<u>CHANGE: 1960-1970</u>				
<u>AREA</u>	<u>1960</u>	<u>1970</u>	<u>NUMBER</u>	<u>PERCENT</u>
Bertie County	1,079	2,135	1,056	97.8
Windsor Township	340	651	311	91.4
Windsor Town	77	288	211	27.4

SOURCE: U.S. Census of Population, 1960 and 1970.

TABLE 6

WHITE AND NONWHITE POPULATION

Bertie County, Windsor Township
and Town of Windsor

1960 and 1970

Area	Total Population		White		Non-White		Percent of Total			
	1970	1960	1970	1960	1970	1960	White 1970	White 1960	Non-White 1970	Non-White 1960
Bertie County	20,528	24,350	8,913	9,897	11,615	14,453	43.4	40.6	56.5	59.3
Windsor Twp.	6,141	6,893	3,405	3,293	2,736	3,582	55.4	47.7	44.5	51.9
Windsor Town	2,199	1,813	1,557	1,171	642	642	70.8	64.5	29.1	35.4

SOURCE: U.S. Census of Population, 1960 and 1970.

TABLE 7

POPULATION DISTRIBUTION CHANGE
BY AGE GROUP AND RACE

Windsor Town

1970

<u>Age Group</u>	<u>All</u>	<u>White</u>	<u>Nonwhite</u>	<u>Percent</u>	
				<u>White</u>	<u>Nonwhite</u>
Under 5	152	95	57	62.5	37.5
5 - 14	406	256	150	63.0	36.9
15 - 24	310	228	82	73.5	26.4
25 - 34	220	168	52	76.3	23.6
35 - 44	259	167	92	64.4	35.5
45 - 54	298	210	88	70.4	29.5
55 - 64	266	197	69	74.0	25.9
65 and Over	288	237	51	82.2	17.7

SOURCE: U.S. Census of Population, First Count Summary Tapes, 1970.

TABLE 8

COMPARATIVE EDUCATIONAL ATTAINMENTS

1970

PERCENT OF ENROLLMENT	BERTIE	HERTFORD	MARTIN	BEAUFORT	PITT
3 - 4 years old	2.8 (1)	8.2 (5)	5.5 (3)	3.2 (2)	6.4 (4)
5 - 6 years old	58.3 (4)	58.8 (5)	50.7 (2)	57.7 (3)	48.5 (1)
7 - 13 years old	96.3 (4)	96.7 (5)	93.8 (1)	94.5 (2)	95.1 (3)
14 - 15 years old	91.3 (3)	88.6 (1)	90.7 (2)	94.7 (4)	95.0 (5)
16 - 17 years old	90.5 (3)	92.3 (5)	92.0 (4)	85.7 (1)	89.9 (2)
18 - 19 years old	53.1 (4)	54.1 (3)	52.3 (2)	45.5 (1)	75.7 (5)
20 - 24 years old	11.6 (1)	14.5 (2)	18.6 (4)	14.0 (3)	90.3 (5)
25 - 34 years old	1.3 (1)	2.2 (3)	2.9 (4)	1.9 (2)	10.2 (5)

Median school years completed,

MALE	7.4 (1)	8.8 (3)	8.6 (2)	9.3 (4)	10.0 (5)
FEMALE	9.4 (1)	10.4 (4)	9.6 (2)	10.3 (3)	10.7 (5)

Percent of high school graduates, 25 or older

MALE	20.2 (1)	30.0 (3)	25.6 (2)	32.7 (4)	37.1 (5)
FEMALE	27.4 (1)	36.6 (3)	29.3 (2)	36.7 (4)	39.4 (5)

Percent NO high school

MALE, 20 - 49	1,343 (2)	1,244 (1)	1,473 (3)	1,548 (4)	3,256 (5)
FEMALE	1,006 (2)	792 (1)	1,120 (3)	1,286 (4)	2,653 (5)

Percent 1 or more years of college

MALE	333 (1)	596 (3)	471 (2)	884 (4)	4,813 (5)
FEMALE	289 (1)	538 (3)	416 (2)	791 (4)	5,013 (5)
Over All Rank	1.9 (1)	3.1 (4)	2.3 (2)	3.0 (3)	4.3 (5)

The rank of each variable is shown in parenthesis. One (1) is the lowest incidence or percentage; five (5) is the highest.

SOURCE: U.S. Census of Population, 1970.

TABLE 9

MANUFACTURING FIRMS
Windsor Planning Area
1975

<u>COMPANY</u>	<u>PRODUCTS</u>	<u>EMPLOYMENT</u> ¹	<u>PERCENT OF TOTAL EMPLOYMENT</u>
Bertie Industries	Sewing	80	17.1
Blue Bell	Garments	146	31.1
Coulbourn Lumber	Lumber	80	17.1
Gillam Brothers Peanuts	Peanuts, Cotton	20	4.2
Stubbs Veneer Company	Veneer	30	6.4
Southeastern Timber	Lumber	30	6.4
Thompson and Company	Lumber	25	5.3
Sears	(mail order)	11	2.3
Bertie Stave Company		12	2.5
Copper Sand Company, Inc.	Sand	6	1.2
Metco	American Bldg. Metal	9	1.9
Windsor Wood Products, Inc.	Furniture Components	20	4.2
TOTALS		469	100%

¹As of September 23, 1975

SOURCE: Town Administrator, Windsor, 1975.

TABLE 10

EMPLOYED PERSONS 14 AND OLDER BY INDUSTRY

Windsor Township

1970

<u>Industry</u>	<u>Number Employed</u>	<u>Percent</u>
Construction	104	3.9
Manufacturing	763	29.0
Durable Goods	430	16.3
Transportation	22	.8
Communication, Utilities, Sanitary Services . .	46	1.7
Wholesale and Retail	344	13.1
Finance, Insurance	76	2.8
Other Professional Services	127	4.8
Educational Services	193	7.3
Public Administration	94	3.5
Other Industries	423	16.1

SOURCE: U.S. Census, Fifth Count Summary, 1970.

TABLE 11

EMPLOYED PERSONS 14 AND OLDER BY OCCUPATION

Windsor Township

1970

<u>Occupation</u>	<u>Number Employed</u>	<u>Percent</u>
Professional, technical and kindred	248	11.3
Farmers and farm managers	127	5.7
Managers, officials, proprietors	147	6.7
Clerical and kindred	224	10.2
Sales workers	64	2.9
Craftsmen, foremen, etc.	302	13.7
Operatives and kindred	557	25.4
Service	255	11.6
Farm laborers and foremen	72	3.2
Laborers	196	8.9

SOURCE: U.S. Census, Fifth Count Summary, 1970.

TABLE 12

TRAVEL EXPENDITURES¹

Bertie County

1973 - 1974

<u>Area</u>	<u>1973</u>	<u>1974</u>	<u>Change: 1973-74</u>	
			<u>Number</u>	<u>Percent</u>
Bertie County	\$116,455	\$135,337	\$18,882	16

¹Travel expenditures are defined as the dollar amount spent by travelers and/or tourists during the year. The travel industry experienced a sharp decline during the early months of 1974 due to a shortage of gasoline. Expenditures during January and February were substantially below 1973 levels. Slight increases were reported during March and April. By May the ill effects of the energy crisis had ended and the travel industry showed positive signs of a healthy recovery.

SOURCE: "Highlights of the 1974 North Carolina Travel Survey".
North Carolina Department of Natural and Economic Resources, 1974.

TABLE 13

FAMILIES BY POVERTY STATUS

Windsor Township

1970

	<u>Above Poverty Level</u>	<u>Below Poverty Level</u>
Receiving public assistance	36	99
Not receiving public assistance	1,082	318
65 years and over	237	392
Under 65 years	4,023	1,464

SOURCE: U.S. Census of Population, Fifth Count Summary, 1970.

TABLE 14

FAMILIES AND UNRELATED INDIVIDUALS INCOME
WINDSOR TOWNSHIP
1970

<u>INCOME</u>	<u>FAMILIES</u>	<u>UNRELATED INDIVIDUALS</u>
Under \$1,000	125	132
\$1,000 - 1,999	146	111
\$2,000 - 2,999	99	38
\$3,000 - 3,999	98	16
\$4,000 - 4,999	129	16
\$5,000 - 5,999	181	17
\$6,000 - 6,999	160	0
\$7,000 - 7,999	127	8
\$8,000 - 8,999	101	11
\$9,000 - 9,999	89	-
\$10,000 - 11,999	108	-
\$12,000 - 14,999	86	-
\$15,000 - 24,999	58	-
\$25,000 - 49,999	28	-
\$50,000 & Over	-	-

SOURCE: U.S. Census, Fifth Count Summary Tapes, 1970.

EXISTING LAND USE

This section analyzes the existing land use patterns in the Windsor Planning Area as indicated on Map 3. (Table 15 gives a crude acreage estimate of each land use category.) An analysis of existing land use patterns is a necessary component of any land use plan since decisions regarding future development cannot be made intelligently without a prior understanding of existing development. As stated in the methodology section, existing land use has been divided into two broad categories of land activity, (1) physical characteristics of the environment and (2) urban and built-up characteristics of the environment.

PHYSICAL CHARACTERISTICS OF THE ENVIRONMENT

Topography and Ground Water

The Windsor Planning Area's topography has been and continues to be a major factor governing its pattern of development. Knowledge of the local geology is important in planning for future growth by providing the key to understanding past development patterns and identifying basic issues that will influence future growth.

The area lies within the Atlantic Coastal Plains Region. Generally, the land is flat. The local drainage pattern is dominated by the Cashie River which runs through the area from its northern to southern boundary.

Windsor's source of water is three ground wells with depths of 170, 110, 100 feet carrying 500, 300, and 200 gallons per minute, respectively. The maximum daily capacity of the water system is 1,500,000 gallons; its peak load to date is 180,000 gallons per day; and water available above peak load is 1,320,000 gallons per day. The water system has an overhead storage capacity of 300,000 gallons and ground water storage capacity of 100,000 gallons.

EXISTING LAND USE MAP
(SEE POCKET MAP IN BACK)

TABLE 15

APPROXIMATE LAND USE BY ACRE

Windsor Planning Area

1975

<u>Land Use</u>	<u>In Town</u>	<u>One Mile Area</u>	<u>Total</u>
Government	25	17	42
Residential	253	61	314
Commercial	47	11	58
Industry	40	44	84
Barren	108	48	156
Utilities	1	5	6
Recreation	9	7	16
Agriculture	54	1,804	1,858
Forestland	<u>373</u>	<u>2,153</u>	<u>2,526</u>
TOTALS	910	4,150	5,060

SOURCE: North Carolina Department of Natural and Economic Resources,
Windshield Survey, 1975.

The chemical quality of ground water in Windsor is less than adequate. A 1959 and 1974 chemical analysis revealed that flouride was in excess of the maximum (1.5 ppm) recommended in drinking water. In addition, the amount of chloride, sodium, and potassium could cause problems for dietary residents. These three elements contribute to the total hardness of the water. The latest analysis was reported by the North Carolina Department of Human Resources, Division of Health Services, Laboratory Section on January 25, 1974. The actual analysis is provided in table form (see Table 16). Note the source of water is only from Well Number One.

TABLE 16

CHEMICAL ANALYSIS OF WATER
Windsor
(Results in Parts Per Million)

Type of Supplier: Municipal
Source of Water: Ground
Source of Sample: 1-Well Tap
Type of Sample: 1-Raw
Type of Treatment: None

<u>ELEMENT</u>	<u>UNITS¹</u>	<u>UNITS²</u>
Sodium	No established limits	250
Potassium	20	12.5
Flouride	3.23	Controlled (0.8 - 1.20)
Arsenic	0.05	0.01
Cadmium	0.01	0.01
Chromium ⁺⁶	0.05	0.05
Copper	1.00	0.05
Lead	0.05	0.05
Zinc	5.00	0.05
Manganese	0.05	0.05
Iron	0.30	0.05
Chloride	250	103
Turbidity	5 Units	.11
Acidity	0	0
Alkalinity	No established limits	319
Total Hardness	No established limits	10
Calcium	--	1.9
Magnesium	--	1.3

¹Limits established according to Public Health Service Drinking Water Standards, 1962, and Standard Methods for the Examination of Water and Wastewater, 12th edition.

²Findings of actual chemical analysis of water in Windsor.

SOURCE: North Carolina Department of Human Resources.

URBAN AND BUILT-UP CHARACTERISTICS OF THE ENVIRONMENT

Residential

The Town of Windsor is characterized predominately by residential development accounting for approximately 253 acres of the total acres in the town. In all, residential uses account for approximately 314 acres of land within the Study Area. The major residential area is bound on the east by the Cashie River and U.S. Highway 17 on the north by King Street, on the west by Hofler Street, and on the south by Sterlingworth Street, with the exclusion of the Central Business District. Very little vacant land is found in this area. The majority of the residential development is single-family, consisting of both modern and elegant colonial styled homes.

Spruill Park Development which began in 1966 is a modern residential area. The area is located northeast of the intersection of U.S. Bypass 13 with N.C. Highway 308, and bound on the west by Henry Street, on the north by Lassiter Avenue on the south by Robert Street and on the east by Henry Street. This area is still developing with approximately 17 acres of residential vacant lots. Also, Highway Commercial activities are developing at the intersection of U.S. Bypass 13 and N.C. Highway 308.

In the vicinity of Spring Street, conventional residential use on small lots predominates. There are several mobile homes dispersed in this area also. Between King and Board Streets there is approximately 5 acres of moderately wooded lands. This land does not appear to lend itself to residential development because of adverse topography. The area is low and experiences occasional flooding.

East along U.S. Highway 17 North is the Bertie Community. Residential uses are predominately conventional. Industrial use is mixed with residential use in the Center Street vicinity. These uses are not compatible because of adverse environmental and health reasons.

The College, Cedar, and Askew Street vicinities can be regarded as "slum areas". This area is characterized by inhabited deteriorating and substandard housing on small lots. Several deteriorating commercial establishments are found in this area also.

Other residential areas in town are the Ghent and Wall Street vicinity; and the Hillcrest vicinity. Conventional residential use predominates these areas. Several new homes have been built in the Hillcrest vicinity within recent years. Moreover, suitable vacant residential lands surround the Hillcrest residential area.

Commercial

From the latter 18th century to present, the Windsor Central Business District has been the major retail center in Bertie County. However, over the past years with the development of neighboring plazas and shopping centers, Windsor's CBD share of retail trade has decreased. Much of the CBD commercial development is old and deteriorating. The physical deterioration of the downtown area, coupled with the decline in economic activity in the CBD, has caused much concern on the part of downtown merchants and residents. The major problem is that of ample parking facilities. This problem currently is a major deterrent to new CBD development.

Without parking facilities convenient to retail activity, it will be most difficult for the CBD to effectively compete with the existing neighboring shopping centers.

Within the Windsor Planning Area there are approximately 58 acres of commercial land, 81.0% of which is inside the town limits. An examination of the existing land use map will reveal the location of commercial lands just discussed.

Industrial

Industrial use is concentrated in four general locations of the Study Area, as follows: The Industrial Park, approximately 0.8 miles south of the town limits off of U.S. Highway 13-17; Coulbourn Lumber Company, just inside the town limits off of U.S. Highway 17 Bypass; Bertie Community, off of U.S. 17 to Edenton; Thompson Lumber Company, off of U.S. Highway 13 to Ahoskie; and Gilliam Brothers Peanuts, intersection of Indian Woods Road and U.S. Highway 13 Bypass. There are approximately 84 acres of existing industrial use in the Study Area, 40 in town and 44 in the extraterritorial area. Several sites are in close proximity to residential areas, which poses problems of unattractiveness, and noise and air pollution. Future industrial development is encouraged in the Industrial Park site.

Forestland

Approximately 49.9% of the Study Area's land is presently under forest cover. Less than 8% of this land is within the town limits. The most extensive areas of forestland are to the northeast and southeast in the vicinity of the Cashie River, and to the northwest in the vicinity of the town limits along N.C. Highway 308.

Floodplains

The susceptibility of areas to frequent flooding during periods of heavy or prolonged precipitation is an important factor in determining the locations of future development in the Windsor Planning Area. The construction of private and public structures in flood plains presents the potential loss of lives and property. Map 4 delineates those flood plains in the Study Area. Although developed land presently exists in many of these flood plains, additional development should be discouraged.

Barren Lands

There are approximately 108 acres of barren land within the town limits of Windsor (for the purposes of this plan, barren and vacant lands are the same). Most of these lands are slowly developing and other parcels lie cleared and in transition. Since development potential is in part dependent upon the availability of vacant land, the Windsor Area presently has no shortage. Potential development for the area for the next decade could easily be accommodated within the town if growth was so confined and the land used fully.

Areas suitable for development are located within various portions of Windsor's town limits. One area is bordered by Sterlingworth Street to the north, Henry Street to the west, and Ghent Street to the east. Other areas suitable for

development lie between Blount Street and College Street; a small portion contiguous to town limits along South Greenville Street; and to the northeast along U.S. Highway 17 (to Edenton) contiguous to Peterson Road.

As the Study Area grows, land suitable for development will increase in demand, resulting in the development of these suitable vacant lands.

Agriculture

The agricultural industry plays an important role in the economy and life style of the Windsor Planning Area. As shown on Map 3, there are approximately 1,858 acres of agricultural land within the Study Area. Essentially, little agricultural activity is conducted within Windsor's town limits. The majority, approximately 97.3%, is conducted in the one-mile area. All agricultural lands are either currently devoted to crop production or have crop production as their primary function. These lands are somewhat equally situated throughout the one-mile area.

SIGNIFICANT COMPATIBILITY PROBLEMS

Compatibility problems have resulted from mixed land uses, particularly residential and industrial uses. Although not considered major in all instances in Windsor, similar incompatible land uses have created problems of pollution, noise, unattractiveness, health, safety, and traffic congestion. Such problems are characteristic of incompatible residential and industrial land uses. Caution should be taken in the Southeastern Lumber Company--Bertie Community area and in the Stubbs Veneer Company--King Street and U.S. Highway 17 Bypass intersection area. These areas are most likely to experience the above industrial-residential incompatible land use problems.

Ideally, residential areas are places to live and enjoy leisure time and vice-versa, industrial areas are places for work and industrial production. Such land uses should be separate. Any future industrial expansion in residential communities is cautioned. Presently, other mixed land uses pose only minor problems.

AREAS EXPERIENCING OR LIKELY TO EXPERIENCE MAJOR LAND USE CHANGE

Windsor's Industrial Park is considered the most suitable area for industrial development. This area is likely to experience major land use changes. Presently, portions of the park are in agriculture use. However, as new industries locate, these land uses will change. Recent installation of a 12-inch water line and proximity to major northeastern transportation routes add to the area's prime industrial suitability.

PROBLEMS FROM UNPLANNED DEVELOPMENT WITH IMPLICATION FOR FUTURE LAND USE

Windsor has several problems that are developing from unplanned development. The areas along South Granville Street, and along portions of U.S. Highway 13 and 17 have some scattered commercial land uses. This development is occurring in proximity to Windsor's better and most recently developed residential areas. Caution should be taken in these areas as development occurs to protect the community from strip development. When strip development occurs, many problems result such as increased traffic congestion and probability of accidents, increased visual clutter from advertising signs, additional demands on town service facilities, and by the nature of the uses located in stripped areas, ultimate abandonment and deteriorating structures.

A poor local street network and very small lots in the southern portion of town are obvious problems resulting from unplanned development. (This area is bounded by Granville Street and Indian Woods Road.) An examination of Windsor's transportation network will indicate that neighborhoods in this area are virtually cut off from each other.

Future development and improvements in this area should focus on providing a local street system. Since several residential lots in this area are very small, hardships are anticipated. For this reason, the most cost-effective means of providing these improvements should be investigated.

CURRENT PLANS, POLICIES, AND REGULATIONS

PLANS AND POLICIES

Windsor currently has three planning related documents that have direct relevance to land development in the Windsor Planning Area. They are a Sketch Land Development Plan, Housing Element, and a Reconnaissance Survey. These documents are described in this section. Also, numerous county and regional documents, to a limited degree, address Windsor land use issues.

The town has adopted various policies which affect land development. As true with other towns, some of these policies are written and some are not written. Due to the changing nature of town development, town needs and activities, changes in elected officials, changes in technology, town policies continually change to adapt to these circumstances.

Policies in some areas are recorded in official's minutes. Consequently, it is difficult to make definitive statements about policies.

Therefore, the policies identified here are those that are written (i.e., those that can be readily identified) and those that do have a direct impact upon land development.

Several of the regulations suggested for discussion in the CAMA Guidelines are not applicable to Windsor because they simply do not exist. To this extent, N/A will identify those policies and plans.

a. Transportation Plans

N/A No official transportation plans exist for Windsor.

b. Community Facilities Plans

The Town of Windsor currently has no Community Facilities Plans.

c. Utilities Extension Policies

(1) Sewer Policy

An Ordinance Regulating Use of Sewers, Town of Windsor, North Carolina. Windsor Town Commission, 1973.

This ordinance regulates the use of sewers by prohibiting new connections from inflow sources and makes pretreatment requirements for major contributing industry comply with Federal regulations.

The following water, sewer and electrical policies are excerpts from the Windsor Subdivision Regulations.

(2) Electricity

"All electrical, telephone and telegraph utilities of an over-head service nature shall be restricted to the rear lots. All subdivisions shall be designed in order that all lots may be served from near utility easements."

(3) Sewage Disposal

"Subdividers shall connect...to the sewer system of the Town of Windsor in order to provide sewer service to every lot within the subdivision."

(4) Water Supply

"Every lot in every subdivision shall be supplied with water from the Town of Windsor...Every lot in every subdivision within the Windsor Town limits shall be located within five-hundred (500) feet of a six (6) inch water line and a fire hydrant."

d. Open Space Policies

N/A The Town has no open space policies.

e. Recreational Policies

No Recreation Policy exists for Windsor; Recreation facilities are provided by Bertie County.

f. Prior Land Use Plans

Sketch Land Development Plan, Windsor, North Carolina, Washington, North-eastern Field Office, Division of Community Services, 1974. This docu-

ment identifies development principles and standards, and divides the Planning Area into five land uses. The Sketch Development Plan is a guide by which local officials and citizens can improve the decision process regarding the uses of land in the Windsor Planning Area.

Housing Element, Windsor, North Carolina. Washington, Northeastern Field Office, Division of Community Services, 1973.

This document identifies housing problems and recommends steps to reduce these problems. Recommendations for objective and planning activities are included as a means of assisting in combating some of the housing problems in the Windsor Area.

Reconnaissance Survey, Windsor, North Carolina, Washington Northeastern Field Office, Division of Community Services, 1972.

Identifies comprehensive planning needs, housing and environmental problems, and outlines requirements for a workable program. An inventory of provisions for planning efforts and activities is provided also.

g. Prior Land Use Policies

No prior land use policies have existed for Windsor.

LOCAL REGULATIONS

- a. Proposed Zoning Ordinance, Town of Windsor, N. C., Washington, Northeastern Field Office, Division of Community Services, 1974.

This document regulates structures and land use in Windsor and its extraterritorial area. It is anticipated that this ordinance will be adopted in 1976.

- b. Subdivision Regulations, Town of Windsor, N. C., Northeastern Field Office, Division of Community Services, 1973.

These regulations are intended to act as a guide for the proper subdivisions of land and are intended to preserve and protect the public welfare. The regulations contain provisions for required streets, lot sizes, adequate water and sewer systems and other standards necessary for the protection of public health, safety and welfare.

c. Floodway Ordinances

The Town as yet has not adopted floodway ordinances. The Town is under the Emergency Flood Insurance Program. It is anticipated that the Town will adopt regulations at such time as sufficient data is supplied.

d. Building Codes

The Town of Windsor enforces North Carolina State Building Codes.

e. Septic Tank Regulations

Bertie County currently enforces septic tank regulations in Windsor according to state regulations. The Town has no additional septic tank regulations.

f. Historic Districts Regulations

Windsor does not have historic districts regulations.

g. Nuisance Regulations

Windsor does not have any nuisance regulations directly affecting land use.

h. Dune Protection Ordinances

N/A

i. Sedimentation Codes

The Town does not presently enforce sedimentation control. The State of North Carolina is currently enforcing sedimentation control within Bertie County.

j. Environmental Impact Statement Ordinances

No Impact Statement is required by the town.

FEDERAL AND STATE REGULATIONS

These regulations were to be supplied by the North Carolina Department of Natural and Economic Resources. As of the date of this printing, these regulations have not been supplied.

ENFORCEMENT OF PLANS, POLICIES AND REGULATIONS

Enforcement of all local plans, policies and ordinances is vested in the Windsor Town Administration's office. However, enforcement of some policies, e.g., water and sewer extensions, require Town Council confirmation.

In addition to providing general town administration, the Town Administrator acts as a full-time inspector. It is questioned whether or not additional or future land use controls/plans/ordinances can adequately be enforced by this office due to increasing time demanded for overall town administration alone.

PUBLIC PARTICIPATION ACTIVITIES

SECTION THREE

IDENTIFICATION AND ANALYSIS OF MAJOR LAND USE ISSUES

The Town of Windsor established an active planning program in 1972. Since its establishment, plans, ordinances and other land use policies have been developed to guide the orderly growth of Windsor and its Planning Area. Presently, the Town Commission and Planning Board are reviewing a Town Zoning Ordinance. These past and present actions have set the necessary foundation for a workable planning program.

In 1974, the North Carolina General Assembly passed the Coastal Area Management Act requiring coastal counties, cities and towns to prepare and adopt land use plans which reflect the desires and needs of coastal residents and which insures the protection, preservation, orderly development, and management of the Coastal Area. The Town Commissioners designated the Windsor Planning Board as the responsible agency for assuring that Windsor's Land Use Plan was prepared in compliance with the CAMA.

To insure the maximum amount of public participation in the planning process, the Windsor Citizens Advisory Development Committee (WCADC) was appointed by the Mayor. The responsibilities of WCADC were to advise the Planning Board in developing a Public Participation Program, and to aid the Planning Board and Town Commission in educating the community to Windsor's CAMA Land Use Planning Program.

The Planning Board and the Advisory Committee held public meetings to inform the citizens of CAMA requirements and to receive citizen input in identifying land use issues and problems. Other methods used and taken to secure views of a wide cross section of citizens were newspaper articles, radio spots, bulletins, leaflets, surveys, and door-to-door interviews.

As a result of the efforts, major land use issue and problems were identified. In addition, alternatives and different courses of action to meet Windsor's needs were explored. Long-range goals and objectives were formulated from the March, 1975 survey and from follow-up meetings held to discuss survey results. In discussing these problems and issues, it was recognized that solutions to Windsor's problems would not occur overnight and that most solutions would require a financial commitment from government and the townspeople over a period of time. For these reasons, long-range goals were adopted. They address the town's most pressing problems in the areas of environmental, housing, social, cultural, recreation, transportation, economic and governmental needs. This plan revolves around these concerns because the local citizens have identified them as problems needing solutions. It is the citizen identification of these goals and objectives which makes them important enough to pursue.

IMPACT OF POPULATION AND ECONOMIC TRENDS

Windsor's permanent population experienced an estimated increase of five percent since 1970-75. As of 1970, the most significant changes occurred in the elderly population and the under 5 age group. The 55 and above age group experienced a 35 percent increase, while the under 5 age group experienced a 13 percent population decrease.

Changes in both age groups are apparently of a national trend reflecting better medical care and health facilities, and no longer a need nor a desire for large families.

The implication of an increasingly older population in Windsor is that specialized demands will be placed on health care and other community services. In addition, the buying power of persons on fixed income will more immediately reflect fluctuations in the national economy.

The implication of a decreasing under 5 population represents possible future under utilization of school facilities. When the under 5 population reaches school age, unless significant in-migration of school age children replenish the losses which have already occurred, alterations in anticipated school needs will be required. Personnel shifts and facility re-organization may necessitate efficient school operations.

A rationalized economic trend could not be determined due to the lack of available economic data on the Town of Windsor. However, income and poverty levels were used to illustrate the economic well-being of the area. These figures indicate that the per capita income in Windsor is \$1,875. In addition, a total of 417 families in Windsor Township are below the poverty level. Nevertheless, industrial and commercial activity is predicted to improve in the Windsor Planning Area. The town has a long history of being the area's industrial and economic center.

ADEQUATE HOUSING AND OTHER SERVICES

Windsor continues to have areas of substandard housing, especially in the low income areas located in the east and northeastern areas of town. In 1970, there were 801 housing units for a population of 2,199. The average household size was 2.88 persons. Of the total population of 2,199, Windsor had a Black population of 642 and of the 801 dwelling units in Windsor, 216 were occupied by Blacks. The 1970 census also reflected a total of 2,099 dwelling units for the

Windsor Town. Area residents have expressed the desire for low and moderate income housing. The provision of adequate housing will become critical as the population increases. (A housing analysis is found in Appendix A.)

The lack of recreational opportunities is recognized as a priority in Windsor. With more leisure time and increased participation of the elderly, recreational need will continue to receive a greater demand during the next ten years.

Of all community services, residents feel that the most serious problem confronting their town is the lack of adequate space for storage of fire fighting equipment. As residential development increases, the need for effective and efficient fire protection can not be emphasized enough. Since fire departments operate on response time, it is assumed that fire equipment stored at separate locations increases response time. In addition, as Windsor extends municipal services to its extraterritorial area, response time is expected to increase. This implies that any area that is not within adequate range of the fire station will not have the necessary fire protection.

Windsor has not developed functional transportation or thoroughfare plans. As a result, the lack of an internal street pattern has created several problems. Residents expressed a great concern in the lack of street improvements, ample parking and the lack of a system of sidewalks. As the population increases, and the area develops, generating more pedestrian and vehicular movement, the provision and maintenance of an adequate and efficient transportation system becomes of extreme importance.

Better recreational, cultural, and other educational opportunities have long been desires of Windsor residents. Several residents recall concerts and performances by the North Carolina Symphony during the 1950's. It is hoped that

growth and development of Windsor will aid in making their memories a reality for others to experience and enjoy.

It is generally felt that Town Government should take an active role in encouraging industrial development and in seeking better medical services in the area. However, it is recognized that these needs will require broader efforts. Hopefully, local, state, regional and national cooperation through various programs will foster positive results.

CONSERVATION OF PRODUCTIVE NATURAL RESOURCES

The Cashie River, wooded swamp lands, and extraterritorial agriculture lands are considered the most productive natural resources in the Planning Area.

Wooded swamp lands of the Cashie River basin are fragile habitat areas of particular importance to Wildlife Conservation. These waters are used as an anadromous fish migration route, Yellow Perch spawning area, White Perch spawning area, Hickory Shad spawning area, and an Alewife and Blueback Herring Spawning area. The North Carolina Wildlife Resources Commission's ecological classification of that portion of the Cashie which flows through the Windsor Planning Area is CLASS 4.

Forestry and agriculture contribute to the natural wealth of the Windsor Planning Area. These natural resources will continue to play an important role in the area.

PROTECTION OF THE NATURAL ENVIRONMENT

The citizens of Windsor seek to encourage wise development of their land and water environment in such a manner that would attract people to the area and not destroy its natural state. Better use of the Cashie River for recreational purposes is one way area residents feel better conservation and productivity of their natural environment can be accomplished.

PROTECTION OF CULTURAL AND HISTORIC RESOURCES

Windsor has played an important part in the development of Bertie County and has a rich heritage that is one of her greatest assets. The preservation of colonial homes and the restoration of the Courthouse are evident in area pride. Windsor's most widely known historic resource is the Rosefield House which has been approved for nomination to the National Register of Historic Places. It is the only structure still standing in North Carolina that has associations with William Blount, a signer of the Federal Constitution. Indeed, this is a significant asset to the citizens of Windsor and should be protected from unplanned development. Since Windsor has several structures that are "colonial in nature", consideration should be given to establishing a Historic District.

DEVELOPMENT ALTERNATIVES

In terms of physical development, area residents feel that existing growth patterns should continue with the exception of incompatible land uses. Development of all suitable lands within the town limits is considered priority. Consideration was given to development of all extraterritorial lands. However, since physical development cannot occur without proper water and sewerage services development of suitable lands within town limits appeared to be more feasible. In addition, since the extraterritorial area is rural in character, development of areas with existing water and sewer lines and developing residential areas was considered priority.

Social, economic and human resource development alternatives included no population growth, and development of only existing industries. These alternatives were dismissed. Residents concluded that Windsor should strive to provide adequate social and economic opportunities that would reflect the estimated area population, and allow for inward migration.

DEVELOPMENT OF OBJECTIVES, POLICIES, AND STANDARDS

The overall goal addressed by the Windsor CAMA Land Use Planning Program was the development of a comprehensive, integrated program of public and local government actions aimed at improving the living and working environment of the Planning Area. The basic guiding concept has been a better, safer, cleaner and economically sound environment. Here are the statements of Planning Objectives, Policies, and Standards to guide the physical, cultural and economic development of the area as perceived and developed by the Windsor Town Commission, Planning Board and Townspeople.

GOALS AND OBJECTIVES

ENVIRONMENT

GOAL: *Promote the preservation and management of natural features of the environment in order to safeguard adverse effects on safety, health, and welfare.*

OBJECTIVES: - To avoid, where possible, the overt destruction of trees and landscapes.

- To clean up existing vacant lots.

- To encourage the general beautification of the Planning Area by implementing an effective Town Beautification Program.

- To adopt and implement an effective drainage program.

- To cooperate with State and Local agencies in providing the most cost effective program for the abatement of air, water, and noise pollution.

HOUSING

GOAL: *To provide an environment in which every resident of the Planning Area may have the opportunity to secure adequate, decent, safe and sanitary housing.*

- OBJECTIVES:
- To create high quality neighborhoods by the strict enforcement of subdivision regulations.
 - To promote the removal or rehabilitation of housing that is substandard while making an effort to provide adequate replacement of housing.
 - To encourage and to develop cooperation among Federal, State, Regional and Local agencies in solving housing problems.
 - To locate available sites for the construction of low-income housing.
 - To maintain the existing quality residential neighborhoods by strict enforcement of zoning, building and housing codes.

SOCIAL, RECREATIONAL AND CULTURAL

GOAL: *To promote and develop various recreational, educational and cultural programs for all ages and income socio-economic groups.*

- OBJECTIVES:
- To provide a system of parks and playgrounds throughout the Planning Area for all age groups.
 - To cooperate with county government in developing recreational facilities.
 - To make better use of Cashie River for recreational purposes by providing public piers and other open space activities.
 - To organize and implement a year-round Senior Citizen Activity Program.
 - To encourage technical training of residents which can be utilized by existing or potential industries. This can be achieved through area technical schools.

TRANSPORTATION

GOAL: *To provide a functional and attractive street system in the Windsor Planning Area.*

- OBJECTIVES:
- Repair and/or upgrade the existing street system to provide the highest practicable level of services.
 - Provide the most functional and cost effective parking facilities in the downtown CBD.

ECONOMIC

GOAL: *To encourage the improvement of the Planning Area as a place of trade and manufacturing.*

- OBJECTIVES:
- To encourage the most satisfactory optimum growth and economic development throughout the area by actively participating in attracting new industry into the area.
 - Institute a downtown revitalization program in order to encourage economic activity and renewed interest in the downtown business area.

GOVERNMENTAL SERVICES

GOAL: *To provide the most cost effective and efficient means of administering governmental services.*

- OBJECTIVES:
- To utilize a provision of water and sewer services as a tool to bring about community development in desired locations.
 - To encourage all residents within town to hook-up to the municipal water and sewer system.
 - To maintain effective police and fire protection by investigating the feasibility of providing centralized police and fire facilities.
 - To improve garbage collection by subsidizing garbage bags and annual leaf vacuum service.
 - To improve the quality and quantity of medical services to area residents.
 - To provide a system of sidewalks in residential neighborhoods.
 - To carry out a strong planning effort for future development through cooperative efforts with county, state and regional agencies.
 - To maintain effective communications between citizens of the area and Town Hall by maintaining a Public Participation Program, and annually administering a citizen attitude survey.
 - To maintain and preserve an ample and clear water supply.
 - To improve the water supply by aerating the water system and by identifying its present source of infiltration.

IMPLEMENTARY POLICY STATEMENTS

The second phase of CAMA Planning will specifically address implementation. The following discussion of general government will give an overall view of Windsor's implementary capability. In addition, specific policy statements, recommendations and implementary activities are addressed.

Windsor is governed by a Mayor-Commissioner form of government. General governmental services include legislative and management activities, staff service, financial management and other miscellaneous activities.

Legislative activities are primarily the function of the Town Commission and Mayor whose duty it is to formulate Town Policy and be responsive to citizen needs. Legal services are provided by the Town Attorney.

Management is the function of the Town Administrator who is responsible for seeing that departments are effective in implementing legislative policy and carrying out the Town's services. The Town Administrator is responsible for preparing an annual budget and acts as a liaison and information source between the Town Commission and department heads.

The Planning Board is responsible for initiating plans and programs for the planning area. Recommendations are made to the Commission by the Board on zoning, subdivision and planning activities in general.

No land use plan is complete without a specific set of guidelines with which to follow in its implementation. Unless these guidelines are included and adopted as a portion of the plan, those persons charged with its implementation will lack direction. These guidelines will take the form of policy statements which can be applied to any situation which arises. In general the objective statements which are listed in Section Three are rewritten in the form of policy statements. These policy statements will set forth objectives by which the goals of the Plan

may be accomplished. While the goals relate to the problems and desires of the general citizenry and are the basis upon which this Plan was formulated, the policy statements provide actions and principles which will guide the Town's administration in dealing successfully with the problems addressed in the Plan. Ultimately, the achievement of the goals will result. Inasmuch as the policy statements are considered objectives to accomplish goals, and the Land Use Plan is also concerned with accomplishing those same goals, this Policy Statements Section should be considered a summarization of the entire Land Use Plan. However, caution should be exercised in reading only this summarization, as data and methodology utilized in formulating this section are contained and quantified in the body of the document.

The policies contained herein will be instrumental in the implementation of this Plan, and will collectively establish the necessary framework for adherence thereto.

Once the Land Use Plan is adopted, it is important that the policies be supported. The impact of the enforcement of the following policies will be a more functional and pleasant environment in which to live and work.

POLICY STATEMENTS

Housing

1. The existing housing stock will be maintained through the rehabilitation of substandard dwelling units, where economically feasible.
2. An adequate supply of both public and market rate housing is to be provided by encouraging local developers to participate in new Federal housing programs, specifically the Housing and Community Development Act of 1974.
3. The residential integrity of existing neighborhoods shall be maintained through the strict enforcement of zoning, housing, and building codes.
4. Available sites for construction of low income housing shall be identified.

Environmental

1. Where feasible, the overt destruction of trees and landscape shall be avoided, especially adjacent to streams, creeks and rivers.
2. All existing vacant lots that pose adverse effects on safety, health, and welfare shall be cleaned up.
3. A Land Use Plan of the Town and Planning Area shall be adopted and updated every five years.
4. An effective Town beautification program shall be implemented.
5. A drainage program shall be adopted and implemented.
6. The most cost effective program for the abatement of air, water, and noise pollution shall be provided by cooperative efforts with State and Local agencies.

Social, Recreational, and Cultural

1. A system of parks and playgrounds throughout the Planning Area shall be provided for all age groups.
2. Cooperation with county government in developing recreational facilities is encouraged.
3. Where feasible, public piers and other open space activities shall be provided along the Cashie River.
4. A year-round Senior Citizens Activity Program will be organized and implemented.
5. Technical training of residents through area schools is encouraged. These training skills can be utilized by existing or potential industries.

Transportation

1. The Town shall repair and/or upgrade the existing street system to provide the highest practical level of services.
2. The most functional and cost effective parking facilities in the downtown Central Business District shall be provided.

Economic

1. The Town shall encourage optimum growth and economic development of the Planning Area by actively participating in selectively attracting new industry into the area.
2. A Downtown Revitalization Program should be instituted in order to encourage economic activity and renewed interest in the downtown business community.

Governmental Services

1. The Town shall utilize the provision of water and sewer services as a tool to bring about community development in desired locations.
2. All residents within the Town limits are encouraged to hook-up to municipal water and sewer services.
3. To maintain effective police and fire protection by investigating and, if found feasible, to provide centralized police and fire facilities.
4. If feasible, the town should subsidize plastic bags and provide annual leaf vacuum service in an effort to improve garbage collection.
5. Improvement in the quality and quantity of medical services to area residents shall be encouraged.
6. The Town should provide a system of sidewalks in residential neighborhoods.
7. Additional street lighting to residential neighborhoods should be provided.
8. The Town shall carry out a strong planning effort for future development through cooperative efforts with county, state, and regional agencies.
9. Direct lines of communication between the citizens of the Planning Area and the Town shall be established and maintained. This communication could take the form of regular citizen attitude surveys.
10. Windsor should seek to improve its water supply by aerating the existing water system and by identifying its present source of infiltration.

In summary, because planning is an essential element in the day-to-day operation of municipal government, policy statements function as the primary decision-making tool. Adherence to those policies minimize the possibility of arbitrary planning decisions. Those policies also serve as guidelines to determine whether existing facilities are adequate for the present population and as indicators of programs or actions necessary to fulfill the needs of the future population.

The purpose of the policies contained herein is to provide the methodology to successfully meet the needs and demands of future urban development. That success will depend upon the cooperation of all administrative bodies concerned, their decision-making powers, and the people within the Windsor Planning Area.

LAND DEVELOPMENT STANDARDS

The development of land within Windsor should be undertaken in accordance with sound resource management principles in order to make the most economical use of public funds invested in services and to enhance private investment in the long term future of Windsor. The following standards will guide the location of development in appropriate areas and identify certain measures necessary to insure safety and convenience for residents of and visitors to Windsor.

A. GENERAL STANDARDS -

- (1) Development should be located on stable, well-drained soils with a relatively low water table.
- (2) Structures should be located on the development site to avoid the destruction of natural vegetation wherever possible.
- (3) Structures should be located on site to avoid the alteration of natural land form and drainage where possible.
- (4) Development should be located to minimize interference with established patterns of surrounding land use and to prevent conflict between incompatible uses of land.
- (5) Development should be located to avoid the destruction or irretrievable alteration of fragile or valuable natural or cultural resources.
- (6) Development should not occur in areas where there is a demonstrated danger of the loss of life or property due to natural or man-made processes.
- (7) Development in areas subject to flooding should be designed and located to minimize the damage caused by such flooding.
- (8) Development should be located and timed to make the most efficient and economical use of existing or proposed public services including water, sewer, solid waste disposal, public safety, schools, libraries and social services.

B. RESIDENTIAL STANDARDS -

- (1) Permanent neighborhoods should be located in sheltered areas protected from encroachment by major transportation routes and incompatible commercial development.
- (2) Permanent neighborhoods should maintain low density levels and large amounts of useable open space to preserve the privacy and aesthetic appeal.
- (3) Residential development which requires septic tanks for sewage disposal should follow current health requirements as to soil type, height of water table and area to prevent pollution of ground water supply, aquifer recharge areas or estuarine waters.
- (4) Development which results in residential densities over 3 families per acre should be served by public or community sewage disposal systems.

C. COMMERCIAL STANDARDS -

- (1) General commercial activities and businesses require locations adjacent to major thoroughfares. The uncontrolled development of commercial sites at scattered locations along highways does not promote good business, is inconvenient for shoppers, promotes inefficient use of valuable developable land, creates dangerous traffic conflicts at each driveway entrance, and seriously impairs the capacity and function of the highway. Therefore, commercial development should be concentrated in groups of complementary uses where possible.

- (2) Small commercial enterprises of less than one acre are encouraged to locate where suitable sites exist among existing commercial uses in order to take advantage of combined drawing power and to increase customer convenience.
- (3) Large scale commercial developments involving one acre or more are encouraged to concentrate complementary uses on sites large enough to provide ample parking, controlled access to highways, and suitable buffering for adjacent residential use.
- (4) Convenience retail facilities designed and limited to serve neighborhood level trade areas only may be appropriate adjacent to some residential neighborhoods if properly buffered to minimize impact on adjacent residences.
- (5) Water related commercial activity such as marinas and piers should be located in naturally protected areas as near deep water as possible where the least amount of alteration of vital marsh and estuarine bottom is required.

D. INDUSTRIAL STANDARDS -

- (1) Industries are encouraged to locate in the Industrial Park.
- (2) Industries locating in the Windsor Planning Area should be required to provide an assessment of the impact of primary and secondary development caused by industry and should use the best available technology to avoid pollution of the water or air during construction and in production.

PUBLIC PARTICIPATION IN GOALS, OBJECTIVES, POLICIES AND STANDARDS FORMULATION

The public participation process depended on the Mayor, Planning Board, Community Development Advisory Committee and area citizenry. Public meetings, a town survey, and presentations to civic groups were the three principal methods of encouraging town-citizen dialogue. A conscientious effort was made to record concerns brought up at the meetings, and the town survey was used as the primary tool in prioritizing area needs. As a result, goals, objectives, policies and standards were formulated. These statements were circulated to the Town Administrator, Planning Board, Advisory Committee and Town Council. The Planning Board in particular has worked to refine the goal statements.

PUBLIC PARTICIPATION METHODS AND DEGREE OF PARTICIPATION ACHIEVED

The following is taken from the Public Participation element of Windsor's CAMA Planning Program. Public participation methods and the degree of participation achieved are contained herein.

PUBLIC PARTICIPATION SUMMARY

1. Evaluation of your Public Participation Program

- A. Does your land use planning depend on the local planner for direction or does citizen involvement offer direction?

Windsor's CAMA Planning Public Program (PPP) depends on the Mayor, Planning Board, Community Development Advisory Committee and area citizenry. The local planner to date has played a minor policy-direction role. He does provide the great bulk of technical support and keeps town officials and local citizens informed on the latest CAMA and related planning developments. He therefore is in a position to shape decisions through the information used in decisions. The local planner has suggested general direction to local citizen planners. This is encouraged in planning areas in which other groups or individuals lack experience. The Town is contracting with the planner on non-CAMA work also.

- B. Unique features of your public participation program that might be useful to other communities.

Although several public participation techniques were used, none were specifically unique.

C. How did you develop your Public Participation Program?

Windsor's Public Participation Program was jointly structured by the Planning Board and Community Advisory Development Committee. It was then recommended to town officials for comments, suggestions, and approval.

D. Do you consider your public involvement a success? Please explain.

Whether or not Windsor's public involvement thus far has been successful can be answered two ways. First, insofar as getting problems and issues identified (from surveys/questionnaires, informal conversations, etc.) it has been successful. Insofar as providing local officials with the public's view of area problems by which administrative decisions such as budgets and other programs can be based, it was successful. On the other hand, insofar as getting mass turnouts at meetings, etc., the program has not succeeded. Windsor's population, however, has never actively participated in public decision-making. Bond issues, downtown work, parks, and even the downtown courthouse refurbishing all occurred without "mass public involvement". Yet, the public has shown more concern in public decision-making over the past 12-14 months than ever before. However, the public here as in other areas expects its officials and boards to make decisions in the public interest. This may not be a good situation - but it's a fact in Windsor.

E. List some key citizens in your public participation program: names, phone numbers.

<u>Elected Official</u>	<u>Phone Number</u>
Mayor L. T. Rascoe, Jr.	794-2568
<u>Town Administrator</u>	
Mr. David Overton	794-3121
<u>Planning Board</u>	
Mr. R. V. Thompson	794-3716
<u>Community Advisory Development Committee</u>	
Mrs. Mary H. Willoughby	794-2317
Mr. D. Wesley Gray	794-3975
<u>Interested Citizens</u>	
William G. Pittman, Jr.	794-3689
William Cratt	794-3131

2. Steps taken to inform local citizens about the CAMA program.

A. Newspaper

Several articles (a total of 6) have appeared in the Bertie Ledger-Advance notifying area citizens of Windsor's CAMA activities. The Bertie Ledger-Advance has a circulation of 3,600. These articles were written to stimulate interest in Windsor's CAMA Program, educate and inform citizenry of the CAMA's purpose and objectives, solicit ideas and define area problems.

B. Radio

Ten-twenty second "radio spots" have been aired simultaneously with news articles (during the week of scheduled CAMA activity) in an effort to reach all segments of the population.

C. Television

Television has not been used in Windsor's CAMA Planning Program.

D. Bulletins, Leaflets, Newsletters

Bulletins provided by the CRC have been placed at focal points throughout the area. In addition, a door-to-door distribution of the "Handbook on Public Participation" to over 95% of the merchants was undertaken. This was an effort to get the Chamber of Commerce and other business interest involved in the program.

E. Other Methods

Numerous workshops have been held by the Institute of Governments, Lead Regional Organizations, and one by the Bertie County Planning Board that focused on planning and CAMA related activities. Due to employment obligations of area citizens, only the latter workshop could be taken advantage of. However, the local planner has attended the majority of these workshops and has kept Windsor informed of related matters.

3. Opportunities for citizens to provide input into land use planning.

A. Personal Interviews

A specific number of interviews cannot be determined. Planning Board members, Community Development Advisory Committee members, local officials and other interested citizens have all personally discussed CAMA planning with residents in such a random and informal manner, that to term their efforts a "personal interview" is misleading. For example, during the door-to-door distribution of the "Handbook on Public Participation", the opportunity was used to inform and generally educate residents of CAMA. Approximately 200 residents were involved in this effort alone.

B. Surveys

One survey and one questionnaire was administered to area residents. The first, Citizen Suggested Town Improvement Survey, was administered in March of 1975 by the Windsor Community Advisory Development Committee. The second, Bertie County Citizen Survey, was administered in April of 1975 by the Bertie County Planning Board (Windsor Township).

C. Workshops and public meetings

Besides regularly monthly Planning Board meetings held on the third Tuesday of each month, five (5) meetings have been held in Windsor by the Planning Board and Community Advisory Development Committee. Bertie County Planning Board has held three (3) meetings in town also. As previously mentioned, a CAMA workshop was held May 29, 1975 in which local citizens participated.

D. Other opportunities

The Town Administrator's office in Town Hall has been and remains available to area residents to leave written comments and suggestions concerning CAMA planning when unable to attend scheduled meetings.

This option was initiated during March, 1975 (week of Citizen Suggested Town Improvement Survey).

4. Quality and Quantity

A. Approximate percentage of community providing input.

All households were invited and given several opportunities to participate in planning. Of the five (5) meetings held by the Planning Board and Community Advisory Development Committee, less than five percent* of the community participated. Out of 650 Citizen Suggested Town Improvement Surveys, 7.5 percent was returned; 34.1 percent of the Bertie County Citizen Survey administered to Windsor Township was returned.

B. Are all ethnic groups and social strata involved?

Both Black and White segments of the population have provided input. Of the 7.5 percent Town Improvement Surveys returned, 18.3 percent came from the Black Community. Racial mix at meetings held was as follows:

Planning Board and Community Advisory Development Public Meetings -

Whites	<u>60%</u>
Blacks	<u>40%</u>

Bertie County Planning Board CAMA Meeting (only those meetings held in Windsor)

Whites	<u>13%</u>
Blacks	<u>87%</u>

*This figure includes both Planning Board and Community Development Advisory Members.

C. Are non-residents and non-voters involved?

No specific attempts to reach non-residents and non-voters living outside Windsor's Planning Area with land holdings in Windsor were undertaken. Non-residents and non-voters living within the Planning Area were reached through the methods addressed in Question 2 of this report.

D. Future participation activities planned.

As indicated in our recently submitted New Proposed CAMA Work Schedule, we plan to hold several meetings and working sessions:

October 6 Draft plan will be presented by the local citizen planner

October 16 Working session between citizen planners, Town Commission, County Advisory Representative

A public hearing will be scheduled after comments and review of proposed plan by CRC.

E. How are you reflecting the responses you are receiving into the land use plans?

The responses received were used in formulating town goals. They will provide the framework for Windsor's Land Use Plan.

Person(s) Filing Report:

MAYOR OF WINDSOR

TOWN ADMINISTRATOR

PLANNING BOARD CHAIRMAN

DNER PLANNER

Name of Community:

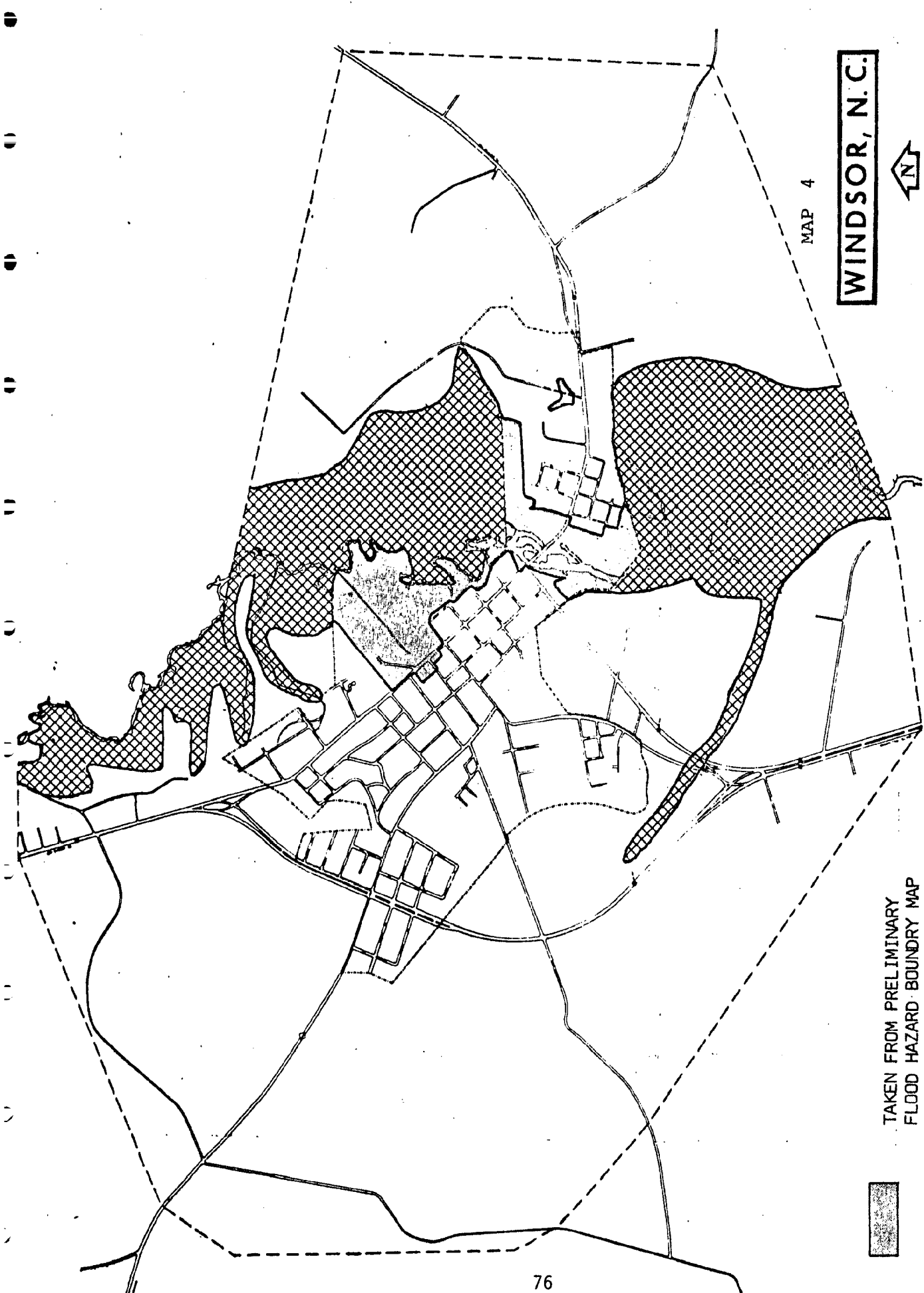
Windsor

Date of Report:

August 27, 1975

CONSTRAINTS

SECTION FOUR



MAP 4

WINDSOR, N.C.



FLOOD HAZARD
AREA

- TAKEN FROM PRELIMINARY
FLOOD HAZARD BOUNDARY MAP
- DETERMINED BY LOCAL RESIDENTS

LAND POTENTIAL

PHYSICAL LIMITATIONS

HAZARD AREAS

MAN-MADE: There are several oil and petroleum product storage areas located within the Windsor Planning Area. Those facilities having housing or other structures sufficiently close to be threatened in case of fire or explosion are located (1) in the Bertie Community at the King and Forest Streets intersection and (2) at Davenport Oil Company off U.S. 17 and 13. Other oil and petroleum storage areas pose no danger to area residents because of their location.

NATURAL: The Windsor Planning Area, due to its elevation and location on the Cashie River, is subject to frequent flooding. Development in the Cashie Flood Plain area would be costly and cause undesirable consequences if developed. A floodplain is a natural limitation for development. It is undesirable for septic tanks, sewage lagoons, and earth movement by machines (see Map 4).⁹ Floodplains should never be built upon for several reasons: (1) because they are susceptible to flooding, and (2) because of the danger to houses, human life, property, roads, bridges and other structures. The advantages of undeveloped floodplains are that they absorb rainfall and retain floodwaters thereby decreasing danger to adjacent areas.

Floodplain areas can be made aesthetically attractive. Also, they have great recreational potential. Thus, The Study Area's floodplain can serve two functions, one of preventing floods and one of providing parks and open space.

⁹A precise determination of the floodplain in the area by Corps of Engineers has not been prepared. However, MAP 4 does give a general location of floodplain areas in the Windsor Planning Area based on data obtained from aerials, maps, available topographic data, etc.

TABLE 17

SOIL INTERPRETATIONS
GENERAL SOIL MAP
WINDSOR, NORTH CAROLINA

LIMITATIONS FOR

SOIL ASSOCIATIONS	Dwellings With				Recreation				Suitability for			
	Sewerage Systems	Septic Tank Filter Fields	Camp Sites	Picnic Areas	Intensive Play Areas	Light Industries	Roads and Streets	General Agriculture	Woods			
1. HAGRAM-OCILLA (Approx. 14% Windsor Planning Area)	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Fair to Good	Fair to Good	Fair to Good
2. DUPLIN-CRAVEN-MARLBORO (Approx. 12% Windsor Planning Area)	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Fair to Good	Fair to Good	Fair to Good
3. LENOIR-CRAVEN (Approx. 11% Windsor Planning Area)	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Fair to Good	Fair to Good	Fair to Good
4. SWAMP (Approx. 23% of Windsor Planning Area)	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Fair to Good	Fair to Good	Fair to Good
5. LENOIR-COXVILLE (Approx. 42% Windsor Planning Area)	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Fair to Good	Fair to Good	Fair to Good
6. WICKHAM-ALTAVISTA-WAHEE (Approx. 47% Windsor Planning Area)	Slight	Slight	Slight	Slight	Slight	Slight	Slight	Good	Good	Fair to Good	Fair to Good	Fair to Good

Abbreviations for Limiting Factors:

Fl - Flood hazard
Wt - Water Table
Traf - Trafficability
Sh-Sw - Shrink-swell potential
R - Rock
Perc - Percolation rate
Cor - Corrosion potential
TSC - Traffic supporting capacity
Prod - Productivity
AHC - Available water capacity

NOTE: The above Table was compiled from general soils information of Bertie County prepared by the U.S. Department of Agriculture, Soil Conservation Service, Raleigh, North Carolina

Abbreviations for degree of limitations:

Slt - Slight
Mod. - Moderate
Sev - Severe

Structures whose footings are in subsoil.

Refers to roads and streets that have subsoil for base.

SOIL LIMITATIONS

An analysis of soil characteristics provide a valuable service by identifying limitations of specific sites and defining areas of potential construction hazards: flooding, erosion, and shallow depth to bedrock. By alerting the Planning Area to these potential problems, proper precautions can be taken to minimize their effects.

In a recent study conducted by Freeman Associates, the soils in the Windsor Planning Area were cited as severe.¹⁰ However, since no detailed soil survey has been made of the area, those soil associations that do have moderate soils cannot be determined. Yet, there are areas with more severe soil problems than others. One such area is the Swamp Soil Association area. As is true with the flood plain, this area should not be built upon because of adverse construction hazards.

To the average individual, soils differ only in color and texture. However, to the trained soil scientist, these and other basic soil characteristics serve as indicators of problems one can expect from a particular soil. A generalized soil survey and map has been completed for Bertie County from which the soils information relevant to the Windsor Community is taken.¹¹

¹⁰The Freeman Associates study, Region Q, Water Resource Management, classified soils as being either severe or moderate.

¹¹Detailed discussion is found in Descriptions of Soil Associations, Bertie County (U.S. Department of Agriculture, Soil Conservation Service, 1969).

This survey provides general information on soil suitability for agricultural purposes and identifies soils whose characteristics offer limitations to urban development. However, the survey states that this information is for broad planning purposes, and is not suitable for planning the operation of a farm, or an individual field, because the soils in one association ordinarily differ in slope, depth, drainage and other characteristics that affect use and management.

There are six (6) soil associations in the Windsor Planning Area. They are as follows:

- 1) WAGRAM - OCILLA Association: Well drained and somewhat poorly drained soils with friable sandy clay loam subsoils.

This association makes up approximately fifty (50) percent of the association. Characteristically, they have gray loamy sand surfaces 20-40" thick over yellowish, brown, friable sand clay loam subsoils.

The Ocilla soils make up approximately thirty-five (35) percent of the association. These soils reflect both the moderately well and somewhat poorly drained conditions. They have gray to dark gray loamy sand surfaces 20-40 inches thick over brown to yellowish brown friable sandy clay loam subsoils.

The Wagram soils present only slight limitations for both farm and non-farm use.

The moderately well drained Ocilla has slight to moderate limitations for both farm and non-farm uses.

The somewhat poorly drained Ocilla, however, reflects severe limitations in use for both farm and non-farm purposes.

- 2) DUPLIN-CRAVEN-MARLBORO: Moderately well drained and well drained soils with gray loamy sand loam surfaces and deep, firm to very firm, yellow to yellowish red clay loam to clay subsoils.

This association constitutes a small percentage of the area's total acreage, approximately one (1) percent. It is found in the Northwestern portion of the Study Area just above Indian Woods Road.

The moderately well drained Duplin soils comprise approximately fifty percent of the association. These soils occupy the more level areas within the association.

The Craven soils make up approximately 30 percent of the association. Craven soils reflect an erosion hazard.

The well drained Marlboro soils represent 10 percent of the association.

The Duplin-Craven members of this association have moderate to severe limitations for such non-farm uses as septic tank filter fields, picnic areas, industrial sites and roads due to relatively slow percolation within the firm subsoils. The Marlboro present only slight limitation in use for either farm or non-farm uses.

- 3) LENOIR-CRAVEN Association: Nearly level to sloping, somewhat poorly drained (Lenoir) and moderately well drained (Craven) soils with gray to dark gray fine sandy loam to silt loam surfaces, 4-10 inches thick over deep, very firm, mottled yellow and gray clay subsoils.

The Lenoir-Craven Association constitutes approximately 11 percent of the area's total acreage. This association runs from Northwest to Southeast portions of the Windsor Planning Area.

The Lenoir soils make up approximately 55 percent of the association. The inherent erodibility of these soils is moderate to severe.

The soils of this association have moderate to severe limitations in use for agricultural lands due to high water tables, flooding, slow percolation and slope. They present severe hazards to use as septic tank fields, industrial sites and other non-farm uses.

- 4) SWAMP: Very poorly drained soil material of highly variable textures and depths occupying positions at or near normal stream level. These soil materials remain inundated throughout most of the year if seasons are normal.
This association makes up 23 percent of the area's total acreage. The Swamp Association represents the low flood plains of the principal drainage system of the area, the Cashie River. The soil materials are severely limited in terms of development.
- 5) LENOIR-COXVILLE: Somewhat poorly drained soils with (4-6") gray to dark gray fine sandy loams to silt loams surfaces over deep firm to very firm gray clay or sandy clay subsoils which are mottled with yellow throughout.
This association makes up approximately 4 percent of the area's total acreage. The soils of this association are found in the southeast portion of the area near County Road 1514.
The Lenoir soils make up approximately 45 percent of the association. These soils are susceptible to erosion.
The Coxville soils make up approximately 35 percent of the association. The soils of this association have severe limitations for both farm and non-farm uses. They have severe limitations for use as septic tank filter fields, camp sites, and picnic areas because of high watertables, slow percolation and flooding.
- 6) WICKHAM-ALTAVISTA-WAHEE: Well drained, moderately well drained and somewhat poorly drained soils with dark gray to brown sandy loam to silt loam surfaces and firm, yellowish red sandy clay loam and gray clay subsoils. These soils are derived from old stream selluvium. The soils of this association make up approximately 47 percent of the area's total acreage. By far, it is the largest association in the Windsor Planning Area. This association is located in the center of the Windsor Planning Area and is dissected by the Swamp Association. The Wickham soils make up approximately 55 percent of the association. The Altavista soils make up approximately 25 percent of the association. The Wahee soils make up approximately 10 percent of the association. The Wickham member has only slight to moderate limitations. The Altavista and Wahee have moderate to severe limitations for both agricultural and non-farm uses because of high watertables, slow percolation and flooding.

Overall, soils in the Windsor Planning Area reflect a variety of management problems as a result of variations in texture, erosion and inherent drainage. These soils pose adverse health and building implications. For example, most of Windsor's soils have high water tables and a slow percolation rate. The percolation characteristics of soils affect the performance of septic systems and of surface and subsurface drainage. Under these circumstances, in areas relying on private wells, the probability of disease, water pollution, and other health problems are greatly increased. In addition, poor soil poses adverse implications on construction and development. For example, the load bearing capacity of soil determines foundation design requirements for structures and the sub-base specifications for roads. As Table 17 shows, generally Windsor soils have a severe traffic supporting capacity. Caution should be taken in new construction throughout the Windsor Planning Area. Again, it is emphasized that this analysis is based on data obtained from a generalized soil survey. On-site testing is necessary to determine suitability of development for specific areas in Windsor.

WATER SUPPLY AREAS

The provision of water and sewer services and facilities serves two functions in the development of an area. They are: (1) meeting needs of existing development; and (2) influencing future growth. Meeting needs of existing development usually receives primary consideration in planning. However, the major importance of water and sewer systems in comprehensive planning is their use as a tool for influencing growth patterns. An examination of existing water and sewer served areas will identify potential growth areas.

The Town of Windsor supplies water to residents within its town limits and to the South Windsor Water Association which extends south of Windsor on U.S. Highway 17-13. The sources of water for the Town of Windsor are three wells with

depths of 170, 110, 100 feet producing 500, 300, and 200 GPM (gallons per minute). The peak load to date is 180,000 GPD (gallons per day). The town's surplus capacity (above peak use) is 1,320,000 GPD (gallons per day). Windsor's water system is looped with an overhead storage capacity of 300,000 gallons and a ground storage capacity of 100,000 gallons.

The town recently installed a 12" water main south along U.S. Highway 17 as part of its economic and industrial development. This area is projected to continue to develop (a more detailed discussion of projected growth areas is found in Section Three of this Plan). The majority of Windsor's residents depend upon the town for their water supply. Presently, few individual wells are depended upon for water supply in town. These few wells continue to operate either because residents prefer to maintain their own water supply or because certain topographic and/or economic constraints which exist currently make it unfeasible to provide water to these areas. Currently, the town serves the South Windsor Water Association which extends south of Windsor on U.S. Highway 17/13 approximately 2 miles. Several other areas outside the Town of Windsor have expressed a desire for town water and sewer services. However, no official action has been taken to date.

Many municipalities prefer that residents obtain sewer service at the time water is provided. This enables the area to be simultaneously served by both water and sewer, thus eliminating duplication of effort in installing one line at a time. This practice should be encouraged by Windsor in order to provide more effective and efficient municipal services. As with water, few areas within the town limits do not have the capability to connect to the town's sewer system. However, the residents in the extraterritorial jurisdiction depend almost entirely upon individual wells and septic tanks for their water supply and sewage disposal systems.

Windsor operates two types of sewer treatment plants: Spiro Gester (Town) and Lagoon (Industrial Park). The Spiro Gester is primary while the Lagoon is secondary. Work is continuing on a new 1.150 mgd secondary treatment facility at the site of the existing lagoons. The completion date has changed from June to September of 1975. Waste treatment effluent and other treatment related effluents are discharged into the Cashie River. A recent study indicates that the collection system is presently experiencing excessive infiltration.¹² The existing Lagoon treatment plant has a maximum capacity of 500,000 GPD while the Spiro Gester has 300,000 GPD. To date, there is no peak flow in the Industrial Park; however, there is a peak flow of 260,000 GPD in town. Surplus capacity, above peak use, is 500,000 GPD in the Industrial Park and 40,000 in town.

¹²See W. F. Freeman Associates, Region Q: Water Resource Management (1975), p. 84.

STEEP SLOPES

Not all of Bertie County, including the Windsor Planning Area, has been mapped by U.S. Geological Survey, Washington, D. C. Therefore, slopes exceeding twelve percent could not accurately be determined. It is assumed that no such slopes exist in the Study Area with exception of river banks.

FRAGILE AREAS

Several of the ten fragile areas addressed in the State Guidelines for Local Planning in the Coastal Area under the Coastal Area Management Act of 1974 are not applicable to the Windsor Planning Area. To this extent, N/A will identify those areas.

Coastal Wetlands

N/A

Sand Dunes Along the Outer Banks

N/A

Ocean Beaches and Shorelines

N/A

Estuarine Waters

N/A

Public Trust Waters

The Cashie River which flows approximately 4.8 miles through the Study Area is identified as public trust waters. The Cashie River is also classified as "Class C" waters in the State Stream Classification System. The best usage of "Class C" water includes fishing, boating, wading and any other usage except for bathing or as a source of water supply for drinking, culinary or food-processing purposes. "Class C" waters are suitable for fish and wildlife propagation. Cashie River development should concentrate on non-intensive recreational uses due to the quality standards applicable to "Class C" Waters. (The "Class C" Stream Classification standards and description is outlined in more detail in Appendix B.)

Complex Natural Areas

No complex natural areas have been identified in the Study Area.

Areas that Sustain Remnant Species

No areas sustaining remnant species have been identified in the Study Area.

Unique Geological Formations

No unique geological formations have been identified in the Study Area.

Registered Natural Landmarks

There are no registered natural landmarks located in the Windsor Planning Area.

Archeologic and Historic Sites

There are no known archeologic sites located in the Windsor Planning Area.

In terms of historic sites, the Rosefield House, birthplace of William Blount, is located in Windsor. Rosefield House has been approved for nomination to the National Register of Historic Places.

AREAS WITH RESOURCE POTENTIAL

Productive Agricultural Lands

Within the Windsor Planning Area there are approximately 1,858 acres of land devoted to agricultural use. These lands, most of which are within the one-mile limits, are productive. Urban development should be directed to sites other than within these type lands. Most of these lands are located in the northwestern and southwestern portions of the Planning Area.

Mineral Sites

There are no known mineral deposits in the Windsor Planning Area.

Publicly-owned Forests, Parks, Fish and Game Lands, and Other Outdoor Recreational Lands

There are no publicly-owned forests, parks, fish and game lands in the Windsor Planning Area.

Privately-owned Wildlife Sanctuaries

None of these facilities are in the Windsor Planning Area.

CAPACITY OF COMMUNITY FACILITIES

WATER

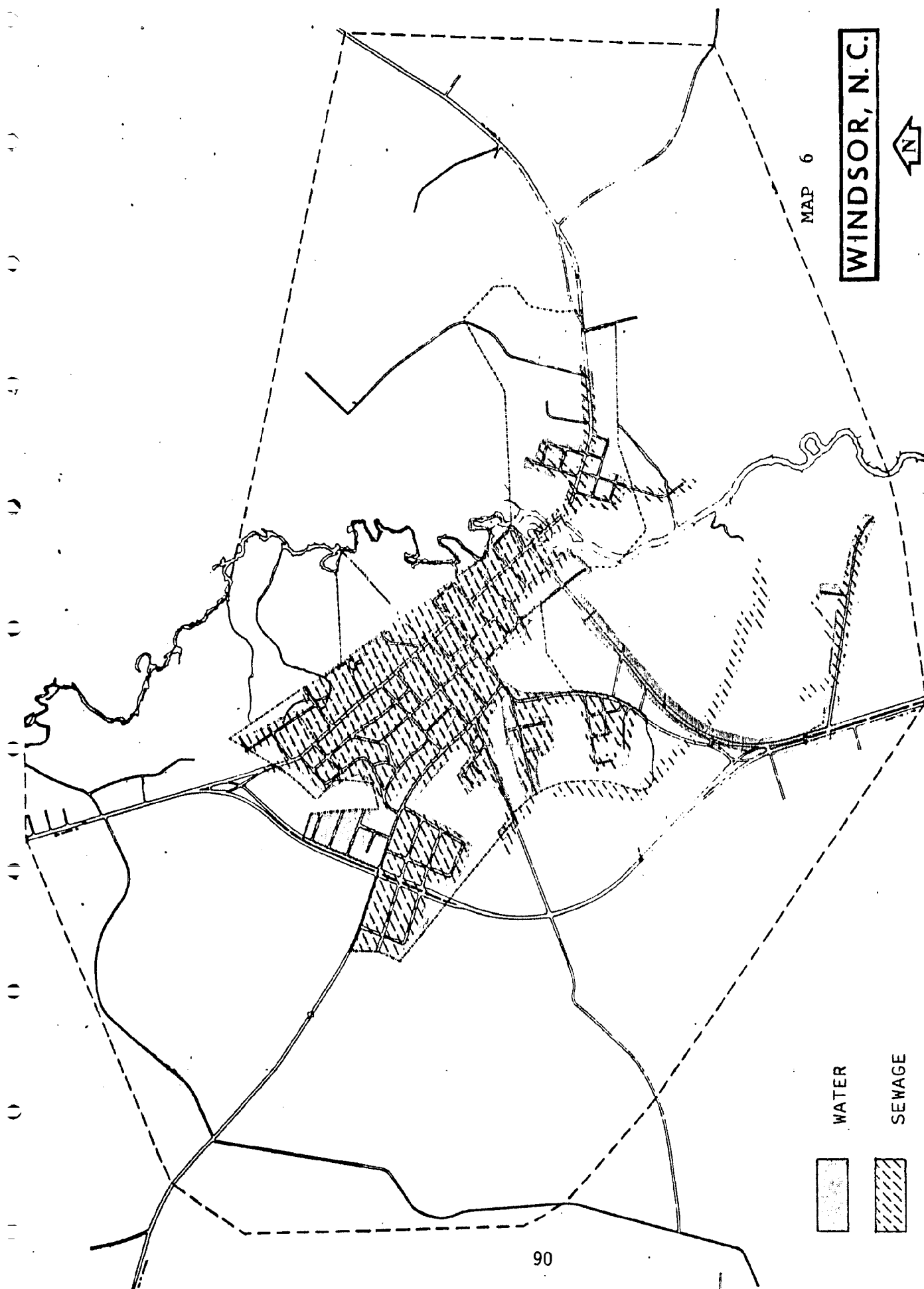
Windsor has a municipal owned water treatment and distribution system. The Town has three wells with a combined capacity of 1,100 gallons per day. Currently the water treatment plant has a capacity of 1.500 million gallons per day (MGD). Present peak consumption is .170 mgd with a surplus of 1,330 mgd over present consumption. Map 6 shows the existing water service area for Windsor. The present water surplus capacity of 1,320,000 GPD (gallons per day) will be adequate to meet additional population demands over the next ten (10) years. Aeration of the water system is the only anticipated future need.

SEWER

Windsor operates a municipal collection and treatment system. There are five pumping stations. The existing treatment facility has a capacity of .800 million gallons per day (mgd). Peak flow to date is .260 mgd with a surplus capacity of .540 mgd above peak consumption. A new 1.150 mgd secondary treatment plant began operation in September of 1975. The surplus capacity of 540,000 mgd will be adequate to handle additional population and industrial growth over the next ten (10) years. (Map 6 shows Windsor's water and sewer area.)

TRANSPORTATION (Primary Roads)

The provision and maintenance of an adequate and efficient transportation system will be of extreme importance to the future development of the Study Area. A transportation system includes not only highways and streets, but rail, air, mass transit, and bikeways as portions of the system. Such a multi-model approach is necessary to provide a balanced system.



MAP 6

WINDSOR, N.C.



SERVICE AREAS

WATER

SEWAGE

BOTH

10



The Windsor Planning Area is served by five primary roads: U.S. 13 By-Pass, U.S. 13 Business, U.S. 17 By-Pass, U.S. 17 Business, and N.C. 308. Other streets generating moderate traffic are: Indian Woods Roads, Granville and Sterlingworth Streets. Pavement widths for these roads are: U.S. 17 By-Pass, 24 feet; U.S. 17 Business, varies from 40 to 55 feet; U.S. 13 Business, 26 feet; U.S. 13 By-Pass, 24 feet; N.C. 308, 20 Feet; Granville, varies from 24 to 40 feet; Sterlingworth Street, 20 feet; U.S. 13 By-Pass varies from 22 feet to 26 feet; and Indian Woods Roads, varies from 18 feet to 32 feet.

Table 18 gives the design capacity, traffic county, and percent utilization of above-mentioned streets. The capacity figures followed by "S" indicate that the possible volume is based on some of the intersections having traffic signals. If there are no signals, possible volumes are about 40% greater.

There are no immediate plans to increase capacity of these roads, nor are there plans to serve the Windsor Planning Area with any new roads. The existing transportation network appears adequate.

Pedestrian travel is an additional mode of transportation that is receiving attention as a result of national energy policies and environmental awareness of local citizens. The use of sidewalks may cause a decrease in the use of the private automobile which could result in savings of fuel. Also, sidewalks in residential areas tend to increase interaction of residents, and in return, significantly increase the livability of the neighborhood. Presently, the town does not have a system of sidewalks. The provision of sidewalks in residential neighborhoods received high priority in the Suggested Town Improvement Survey. Therefore, the provision of sidewalks to facilitate pedestrian travel should be considered.

TABLE 18

PRIMARY ROADS
TOWN OF WINDSOR

1975

<u>Road</u>	<u>Design Capacity</u>	<u>Vehicles Per Day</u>	<u>Maximum % Utilized</u>
U.S. 13 By-Pass	13,000 - 30,000 VPD ¹	2,800 - 3,200	10.6
U.S. 13 Business	9,000 - 15,000 (s) ² VPD	2,700 - 5,100	34.0
U.S. 17 By-Pass	13,000 - 30,000 VPD	3,000 - 7,200	24.0
U.S. 17 Business	15,000 - 18,000 (s) VPD	4,400 - 6,400	35.5
N.C. 308	12,000 VPD	2,200	18.3
Indian Woods Roads	11,000 - 15,000 VPD	1,070 - 1,100	7.3
Sterlingworth Street	12,000 - 18,000 (s) VPD	2,200	12.2
Granville Street	18,000 (s) VPD	2,200 - 4,400	24.4

¹Vehicles Per Day²Roads with traffic signals

Schools

The Windsor Planning Area is served by Bertie County Public School System and two private institutions. Two county facilities are located in Windsor, W. S. Etheridge and Windsor Elementary Schools. As shown in Table 19, the average daily membership projection is 4,703 in 1976-77 and 4,492 in 1977-78. The 1973-74 school enrollment was 5,932. This projection indicates a decline of 1,440 students from the 1973-74 to 1977-1978. The projection decline is probably attributed to the decrease in the under five age group. (See population age group characteristics in Section II.)

In 1974, Bertie County Board of Education made proposals for school improvements. These proposals take into consideration the projected student loss. Table 20 is an inventory of the Bertie County School System and Table 21 summarizes the Bertie County Plan for Reorganization.

Town Hall

All town departments are housed in the Windsor Town Hall, located on King Street. They consist of Police, Fire, Sanitation, Electrical, Water and Sewer, Cemetery and Administrative Departments. A limited area for parking is provided for town employees at the rear of the building.

Presently, there are considerable overcrowding problems associated with Town Hall. However, the town government must grow proportionately with the population and consideration must be given to expanding the present facilities or relocating some departments presently housed in the building. Some thought has been given to a centralized Police and Fire Department Facility.

TABLE 19

BERTIE COUNTY SCHOOLS
Average Daily Membership Projections

	<u>1976 - 1977</u>	<u>1977 - 1978</u>
Total	4,703	4,492

SOURCE: Bertie County Board of Education, 1974.

TABLE 20

PUBLIC SCHOOL FACILITIES, BERTIE COUNTY
1973-74 School Year

SCHOOL	Capacity	Enrollment	Teacher Allotment	Pupil/Teacher Ratio	Grades Taught	Yr. Erected Plus Additions
Askewville Elementary	200	204	7	29.1	1-7	1964
Aulander Elementary	420	131	4	32.7	5-7	1914, 26, 41
Bertie Junior High	800-1000	1058	51½	20.7	8&9	1962, 68
Bertie Senior High	900-1100	1304	61½	21.4	10-12	1962, 68, 70, 72
C. G. White Elementary	575-625	333	12	27.7	K-7	1951, 70
Colerain Elementary	500	305	12	25.4	5-7	1922, 39, 49
John B. Bond Elementary	460	322	11	29.2	K, 3-5	1935, 52
John P. Law Elementary	225	183	7	26.1	K-7	1961
Roxobel/Kelford Elementary	330	212	6	35.3	6&7	1928
South Aulander Elementary	225	201	8	25.1	K-4	1964
West Bertie Elementary	225	210	8	26.2	K-2	1961
West Colerain Elementary	200	373	13	28.7	1-4	1932, 61
W. S. Etheridge Elementary	780	568	23	24.7	NG	1925, 46, 52
Windsor Elementary	660	528	21	25.1	NG	1926, 41, 47

SOURCE: Bertie County Board of Education, 1974.

TABLE 21

PLAN FOR REORGANIZATION
Bertie County

Attendance Area	Schools Serving Area by Grades	73-74 Membership	Projected Plans For Use	Resulting Organization 77-78	77-78 Membership
Askewville	Askewville 1-7	194	Add-1 Class	K-8	237
Aulander	Aulander 5-7	125	Abandon		
	South Aulander K-4	187	Addition	K-8	264
Powellsville	C. G. White K-7	310	N C*	K-8	246
Colerain	Colerain 5-7	296	Renovate		
	West Colerain 1-4	348	Renovate	K-8	749
West Bertie	J. B. Bond 3-5	304	Abandon		
	West Bertie K-2	201	Addition	K-8	530
	Roxobel/Kelford 6-7	180	Abandon		
Windsor	W. S. Etheridge K-4	551	Abandon		
	Windsor 5-7	515	Abandon	Not In Use	0
Merry Hill	J. P. Law K-7	173	N C*	K-8	181
Bertie Jr.	Bertie Jr. 8-9	1002	Convert to K-8 Windsor Dist.	K-8	794
Bertie Sr.	Bertie Sr. 10-12	1188	Convert to 9-12 Sr. High Additions	9-12	1491
TOTAL		5572			4492

SOURCE: Bertie County Board of Education, 1974.

Public Safety

Police

The residents of the Planning Area are provided police protection by the Windsor Police within the Windsor Planning Area and Bertie County Sheriff's Department in areas beyond the extraterritorial area. The Windsor Police Department located in Windsor Town Hall and the Bertie County Sheriff's Department is located in Bertie County Courthouse. Police protection consists of five full-time and four part-time county officers and four full-time and one part-time official.

During 1974, the Police Department handled approximately 285 major and minor offenses and recovered \$2,053.55 of the reported \$3,694.00 stolen property. Over 46 hours were spent investigating traffic accidents, and over 204 calls were answered in its effort to provide protection to area residents.

Fire

The Town of Windsor is provided fire protection by the Windsor Fire Department. The headquarters of the Fire Department are at Town Hall. There are two full-time and thirty-six volunteer firemen. Engine Company Number One has a fire insurance rating of 7 and is motorized by four fire fighting equipped trucks. The Fire Department Headquarters lack sufficient space for all fire apparatus. Because of this lack of space, fire equipment is stored at two separate locations. This could be a handicap to fire protection operators. Also, the continued development of commercial strips could decrease the efficiency of fire protectors to businesses, since concentrated commercial development is more easily served.

Libraries

The expanding population, the attainment of higher education, and the emerging leisure life style have all contributed to making libraries a desirable part of community life. Libraries contribute to the continuing education of all individuals who use them. Therefore, the expansion of library services could parallel development in the Planning Area.

The Town of Windsor has one public library, Lawrence Memorial Library. Lawrence Memorial belongs to the Albemarle Regional Library System. The main library is located in Winton.

Mobile library service is available twice a month through the Albemarle Regional Library System. Lawrence Memorial has an estimated volume of 25,000 books with an estimated book circulation of 18,000 (1974). During 1974, library users numbered from 575,585 and 588, in September, October, and November respectively.

One full-time librarian is maintained by Lawrence Memorial with an annual operating budget of \$15,800 (1974). The Library hours are from 10:00 A.M. to 12:00 Noon and from 2:00 P.M. to 6:00 P.M. Monday through Friday.

Medical Facilities

The availability of medical facilities and services to all socio-economic segments of the population is a valuable asset to any community due to an inherent concern for the health of the individual and family. The Windsor Planning Area is served by Bertie Memorial Hospital. It has 50 beds and offers medical care to both town and county residents.

In addition to service offered by Bertie Memorial, the Windsor Rescue Unit offers 24 hour ambulance service and transportation of sick and injured. The unit offers first aid and all types of rescue services.

Windsor has a rest home, Windsor Park Home, with facilities for 21 residents. Overall professional medical assistance is provided through the town's four M.D.'s and two dentists.

Recreation

Recreation is playing a vital role in personal development, cultural advancement, social reform, and emotional stability. Recreation involves the pleasureable and constructive use of leisure time (an increasing life-style change). It is relaxation and release from strain which may be physical, intellectual or emotional; it may be active or passive in nature; and it may be engaged in at any time and in any place. Recreation can form the basis for emotional release, and it can instill the spirit of fair play and competition. In addition, members of all levels of the socio-economic structure can find equality while engaging in the many activities of recreation.

Recreation was one of the most identified needs of the area in a recent survey. Presently, the Town of Windsor does not have a recreational plan or operate a recreational program. Most recreational opportunities are offered through the County Recreational Program which consists mainly of Little League Baseball and Tennis.

There is one private park maintained by the Jaycees (Jaycees Park). Golf and pool facilities are not provided by the town. However, there is one private pool and one private golf course.

Windsor recognizes the need to provide year-round recreational opportunities. However, just as many other local communities, Windsor does not have the resources to meet this need. As stated in the Statewide Comprehensive Outdoor Recreational Plan, the establishment of State grant-in-aid programs for acquisition of areas at the local level would facilitate improvements of recreation facilities. Financial support from various foundations, businesses, and other organizations is needed to meet Windsor's recreational needs. These needs and other recreational opportunities will continue to demand greater emphasis in the area.

ESTIMATED DEMANDS

SECTION FIVE

POPULATION AND ECONOMY

POPULATION

Basic characteristics of the population (discussed in SECTION TWO) are significant in their effects on possible future land development. Demands for land use activities may be ascertained (community facilities, etc.) based upon demographic calculations and projections.

The base used in projecting Windsor's future population was the 1970 Census. The projections utilize a method which considers past projection characteristics and trends, birth rates, death rates, migration rates, and other variables. This method is considered reliable by demographers. However, when considering projections, one must remember, projections are only predictions based upon many variables.

TEN YEAR POPULATION PROJECTION

As shown in Table 22, Windsor's population is projected to increase from its present 2,300 to 2,642 by the year 1985. This represents fifteen (15) percent change.

CONSIDERATIONS TAKEN IN PREPARING TEN-YEAR PROJECTION

Seasonal populations are felt to have no significant effect on the present population. In addition, seasonal populations are not expected to have a significant affect on future populations. However, projected regional social and economic improvements will affect Windsor's projected ten-year population. That is, area residents feel that better regional improvements in housing, medical services, transportation, etc. will aid in Windsor's development and in maintaining a slow but steady population growth rate. The town should concentrate on developing enough services to support the existing population and inward county migration. Windsor is seen as a small progressive town by its residents.

Five, Ten, Twenty-Five and Fifty Year Projections

Windsor's 5, 10, 25 and 50 year projections are shown in Table 22. Local population estimates are indicated in Table 23. Local estimates are particularly noteworthy after year 2000. The Department of Administration (DA) projection shows a decrease of 733 people between year 2000 to 2020 while the local estimates show an increase of 470 people during the same period. The projected population decline may be attributed to a number of assumptions built into the population model. Projection model assumptions could include the rate at which families are formed, prosperity or depression, or marriage rates, etc. In other words, there is no absolute definitive reason for this sudden projected decline in population. Area residents feel that as economic and social conditions in the region improve, Windsor's population will stabilize and maintain a continuous increase during the next forty (40) year period (1980-2020).

Local estimates do not differ greatly from the DA projections until after the year 2000. For this reason reference will be made to the local estimate when discussing year 2010 and 2020. Also, the higher population projection compliments the town's goal "to encourage the most satisfactory optimum growth."

TABLE 22

POPULATION PROJECTIONS							
Town of Windsor							
1975-2020							
<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>
2,300	2,494	2,642	2,789	2,969	3,150	2,861	2,317

SOURCE: N.C. Department of Administration

TABLE 23

POPULATION ESTIMATES

Town of Windsor

1980-1990

<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>2020</u>	<u>2010</u>	<u>2020</u>
2,465	2,622	2,781	3,150	3,377	3,620

SOURCE: Local Citizens, Town of Windsor, 1976.

RELATIONSHIP OF LONG-TERM PROJECTIONS TO DESIRES OF THE PEOPLE

The long-term projections shown in Table 23 reflect local citizens' desires for a slow, but steady population growth. Local residents also feel that these projections are consistent with their resources to provide supporting services. (See previous discussion of 5, 10, 25 and 50 year population projections.)

CAPABILITIES (CARRYING CAPACITY) OF THE LAND AND WATER TO SUSTAIN GROWTH

The carrying capacity issue should be considered here. Carrying capacity refers to the capability of the land or water to handle human development without damage to the natural resources. In Windsor the issue is not nearly so important as in those counties and cities with fragile salt water resources and greater populations. However, redevelopment and improvement of present living conditions will continue. Any new development requiring water and sewer will need to locate near Windsor where the facilities are capable of handling considerably greater demands. With the trend towards rural living and vacation or retirement homes, clearly the most vulnerable areas are those near the Cashie River. Rigid enforcement of existing sanitation codes is mandatory if water quality is to be protected.

EXAMINATION OF SEASONAL POPULATION AND ECONOMIC IMPACTS

Seasonal populations are not anticipated to have a significant impact on economic activity in Windsor. For example, there are no motels or hotels within the Planning Area which tourist (traveling along scenic Highway U.S. 17) can utilize. However, it is assumed that businesses will capture a limited amount of gasoline sales during summer months. This impact will be further reduced with the completion of I-95 within the next five to ten years.

ECONOMY

As with most places less than 2,500 in population, economic data is limited. Economic projections are based on a variety of economic data. Hence, there is no way to make a realistic economic base analysis of Windsor. This discussion can point to Windsor's Industrial Park as having some economic impact on the future.

Perhaps, recent installation of water and sewer lines to the Industrial Park is a crude indicator of potential economic activity in the area. Yet, with no comparison data, only economic assumptions can be made.

Windsor, the Bertie County Seat, served as a regional economic center since its early history. Although downtown economic activity has decreased over the past years as evident of several vacant and deteriorating structures, the town is still viewed as a local economic center lying between Ahoskie and Williamston, primarily serving the residents of Bertie County.

Windsor does not have the population to support both downtown and commercial activities and shopping center activities. Therefore, commercial establishments are being encouraged to locate in the downtown area. Enactment of the proposed Zoning Ordinance will aid in retaining commercial activity in the downtown area. To make the downtown business district more attractive, the town plans to completely "up-lift" downtown Windsor. Other plans include providing ample off-street parking.

It is hoped that these improvements will aid in completely reviving downtown economic activity. Renovation of vacant buildings will provide ample space for business expansion and businesses seeking new locations.

FUTURE LAND NEEDS

The Coastal Area Management Act Guidelines suggest steps for determining future land needs.¹³ These standards can be more readily applied to counties rather than to small rural towns (less than 2,500) primarily due to density requirements associated with each land use class. Nevertheless, the following land assessment does take into account the prescribed methods where applicable.

¹³See State Guidelines for Local Planning in the Coastal Area Under the Coastal Area Management Act of 1974 (1975), p. 33.

RESIDENTIAL LAND NEEDS

Forecasting future land needs is a helpful land use planning technique. The method set forth is found in Urban Land Use by F. Stuart Chapin, Jr. Chapin's method has been slightly modified reflecting data inadequacies. An analysis of residential area requirements falls into the following steps.

1. Organization of relevant existing housing data.
2. Develop working assumptions and estimate future needs,
3. Fill space needs to vacant land supply.
4. Summarize space needs and population.¹⁴

(Step 1) As of 1970, there were 801 year-round housing units in Windsor.

Tables 1 through 6 in Appendix A give existing housing related data,

(Step 2) It is assumed that the average household size of 2.83 will remain constant over the planning period. By applying the present average household size to the present population and to the projected population, the difference between these two results provides a crude unadjusted projection of the total new dwelling unit requirements.

Also, it is assumed that a total of 19 homes in the current housing stock will be lost over the next ten years due to fire and other catastrophes. This is based on local observations of past losses and adjusted downward for anticipated improvements in fire-fighting potential and the expected effectiveness of local governmental operations during this planning period.

(Step 3) Essentially the third step involves fitting space needs to land supply. Windsor has a total of approximately 110 acres of vacant lands suitable for residential purposes. By applying the Transitional Class density of a minimum of 2,000 people per square mile, the holding capacity of

¹⁴F. Stuart Chapin, Jr., Urban Land Use Planning (Urbana, Chicago, London: University of Illinois Press, 1972), pp. 422-439.

vacant suitable lands within the town limits would be approximately 350.

(Step 4) This step summarizes space requirements and population projections in Windsor. Windsor is expected to reach 2,642 by 1985. In summary, this would mean an increase of 342 people and a new construction housing demand of 121 assuming the present household size is constant.

INDUSTRIAL LAND NEEDS

The Industrial Park is considered the most suitable industrial land. Recent installation of a 12-inch water line to this area adds to its prime industrial suitability. Thus, Windsor has 109 acres of suitable industrial land in addition to the present 84 acres of industrial land uses. This will be adequate to accommodate anticipated future industrial use.

COMMERCIAL LAND NEEDS

Recent clearance and street improvements were made in the King Street downtown area. These improvements were made especially for commercial development. The area totals approximately four acres. This area and other vacant downtown buildings will provide adequate space to accommodate future commercial development.

COMMUNITY FACILITIES DEMAND

As previously mentioned, the area along U.S. 13 By-Pass west of Town is expected to experience moderate growth over the next ten years. Installation of a 12" water main will accelerate both industrial and residential growth in the area. Both studies, Rivers and Freeman Associates, state that as additional industries locate in the area (presumably the Industrial Park Area) additional wells and elevated storage will be required to meet their demands. Currently, the water treatment plant has a capacity of 1.500 million gallons per day (mgd). Present peak consumption is .170 mgd with a surplus of 1.330 mgd

over the present consumption. The present water surplus capacity of 1,320,000 GPD (gallons per day) will be adequate to meet additional population demands over the next ten (10) years. Aeration of the water system which is presently being sought is the only anticipated future need.

Table 24 shows the projected average water demand for the Town of Windsor. A steady increase in water consumption has occurred over the past years.

SEWER

The new 1.150 mgd secondary treatment plant, scheduled for operation in September, 1975, will provide adequate waste treatment facilities for the duration of this planning period. The Freeman Study states that the facility will probably require renovation about the year 2000, and recommends that a study be undertaken to determine the degree and sources of infiltration of the Town collection system. The existing treatment facility has a capacity of .800 million gallons per day (mgd). Peak flow to date is .260 mgd with a surplus capacity of .540 mgd above peak consumption. In addition, a new 1.150 mgd secondary treatment plant is in operation. The surplus capacity of 540,000 mgd will be adequate to handle additional population and industrial growth over the next ten (10) years.

Table 25 shows the projected average wastewater flow. Parallel to projected water demand, wastewater flow has shown a steady increase over the past years and is expected to continue.

LIBRARIES

The value and impact of a public library's resources on the people is enormous through its cultural enlightenment of the community. The Albemarle Regional Library System currently serves the Windsor Planning Area.

TABLE 24

PROJECTED AVERAGE WATER DEMAND

Town of Windsor

1975

Town	1960	1970	1980	1985	1990	2000	2010	2020
Windsor	0.181	0.220	0.274	0.304	0.335	0.410	0.401	0.348

SOURCE: Freeman and Associates.

TABLE 25

PROJECTED AVERAGE WASTEWATER FLOW
Windsor
1975

<u>Town</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
Windsor	0.181	0.220	0.274	0.335	0.410

SOURCE: Freeman and Associates.

Lawrence Memorial Library is part of this system. According to the American Library Association, a standard of two books per capita are minimum requirements for small library systems. Lawrence Memorial has an estimated volume of 25,000. Assuming the population projections¹⁵ are realized, Lawrence Memorial will provide ample service to the projected 6,960 area inhabitants in 1985.

In addition, the American Library Association suggests a floor space standard of 0.6 feet per capita. Using that standard, Lawrence Memorial would need only 4,176 square feet to meet the needs of its 1985 population. Presently, the library has 5,000 square feet. Thus, the Planning Area's library facility is adequate for future needs.

NOTE: This plan did not attempt to evaluate the "quality" of library volumes. This is only a statistical attempt to evaluate the adequacy of library services in terms of projected population.

FIRE PROTECTION

The most serious problem confronting the town with regard to fire protection is the lack of adequate space for storage of fire equipment. The Town presently has a seventh (7th) Class Fire Insurance Rating. Improvement would not only provide more adequate fire protection but possibly lower fire insurance premium costs.

Water availability for fire fighting is a problem in the Planning Area. The American Insurance Association has set up requirements for adequacy of the water system...based on average conditions found in communities of various sizes.¹⁶ Accordingly, the required fire flow is as follows:

¹⁵Township projections are used because Lawrence Memorial's service area extends beyond the Windsor Planning Area.

¹⁶William I. Goodman and Eric C. Fruend, eds., Principles and Practices of Urban Planning (Washington, D. C.: International City Manager's Association, 1968), p. 223.

REQUIRED FIRE FLOW

<u>Population</u>	<u>Average City/Town</u>		<u>Duration</u>
	<u>gpm</u>	<u>mgd</u>	<u>Hours</u>
1,000	1,000	1.44	4
1,500	1,250	1.80	5
2,000	1,500	2.16	6
3,000	1,750	2.52	7
4,000	2,000	2.88	8
5,000	2,250	3.24	9

SOURCE: Standard Schedule for Cities and Towns of the United States with Reference to Their Fire Defenses and Physical Conditions (New York; American Insurance Association) (National Board of Fire Underwriters), 1956, ed.).

Presently, Windsor with a 1970 population of 2,199 has a 1,000 gpm capacity. According to the National Board of Fire Underwriters the town should presently have a fire flow of at least 1,500 gpm. If population projections are realized by 1985, Windsor will have a population of 2,642. Thus, by 1985 the required flow will be approximately 1,750 gpm. Since water availability is one of the most important factors in fire protection, the Town and Fire Department should take immediate steps to improve existing fire flow and take appropriate steps to meet future demands.

The future provision of fire protection to portions of the Planning Area, which may be annexed by the Town, will greatly depend upon the availability of water.

A final consideration as to future needs of the Fire Department is that of a new building with training facilities. As stated in the outset of this section, adequate space is needed. Because of the lack of adequate space, the need for a modern, well-equipped training center is evident. If sufficient funds are not presently available to construct the entire center, possible purchase of land in a desirable location should be investigated.

POLICE PROTECTION

The projected population increase in the Planning Area will command additional police protection. Using the International City Manager's Association standard of 2.0 uniformed officers per thousand population, Table 34 shows minimum requirements for police force. The "2.0 uniformed officers per thousand population" means that two uniformed officers for every thousand residents should always be on duty. The present ratio of officers to population is favorable when compared to the IMCA standard.

FACILITIES COST

The provision of adequate space for town administrative services and the provision of an adequate water system are Windsor's most pressing needs. All town departments are housed in the existing facility on King Street. Space is limited in this facility, thus creating an inefficient and nonconductive working atmosphere. Secondly, as Windsor strives for industrial growth and development, water and sewer demands will increase. The recently opened waste treatment plant will meet future waste treatment demands; however, as new industries locate in Windsor water demand will increase. The cost implications of growth and development must be fully understood by all citizens. According to Windsor's Town Administrator, it would cost approximately \$150,000 for a Central Fire and Police facility and approximately \$27,000 to renovate the present Town Hall facility. Presently, funds are being sought for aeration of the water system. Aeration cost is estimated at \$120,000. This amounts to approximately \$297,000 in capital needs. Therefore, every possible federal, state, and local source should be explored. The town should seek revenue sharing money provided these funds are continued.

If not, other possible sources could come from a bond referendum and/or tax increases.

In summary, the community facilities needs contained herewith have been produced to provide insight into the future needs of the Windsor Planning Area. The town should remain cognizant of the need for various community facilities and maintain an up-to-date inventory of the factors which generate these needs. Specific functional plans, e.g., community facilities plan; capital improvements plans, etc. should be prepared in order that the adequate provision of community facilities may be provided.

PLAN DESCRIPTION

SECTION SIX

LAND CLASSIFICATION DESCRIBED

The Land Classification Map, MAP 7, is a general graphic depiction of the manner in which future development in the Windsor Planning Area is expected to occur. Previous discussions have attempted to address, in specific details, future land use demands and constraints.

The land classification system as outlined in the Guidelines is divided into five areas: developed, transition, community, rural, and conservation. The following is a general description of each land classification.

Developed - Lands where existing population density is moderate to high and where there are a variety of land uses which have the necessary public services. These lands are delineated in solid rust on the Land Classification Map. Although growth must be recognized and planned for, the Town should not lose sight of the fact that rehabilitation and alleviation of land use problems in older areas of the Town should also be strived toward during the planning period. It is hoped that by alleviating many of the problems existing in the Developed areas, those same problems will not occur in newly developing areas.

Function and Standards

Developed lands will provide the service and growth centers for the Planning Area. They are intended to accommodate the greater portion of the necessary and natural expansion of residential, commercial, and industrial activities. The needs of Windsor's permanent population for housing, recreation, commercial activity, social and professional services will be met in these areas. The building intensity in the developed areas will allow the economic feasibility of a high level of public and institutional services. Continued development and redevelopment is encouraged to provide for the orderly growth in this area.

Transition - Lands where local government plans to accommodate moderate to high density development during the following ten year period and where necessary public services will be provided to accommodate that growth. These lands are delineated in hatched rust on the Land Classification Map. Windsor's transitional lands are located adjacent to developed lands within the town limits and in the eastern and southern portion of the Planning Area in the Sanci Road and Industrial Park vicinity.

Function and Standards

Transition lands will provide for moderate intensity development in areas where development will not significantly harm relatively tolerant natural resources. These areas are designed to provide for residential expansion and growth and to accommodate uses related to and compatible with residential uses in the vicinity of developed lands where utilities and community services can be most economically and readily provided. Development in Transitional areas will be at a generally less intense level than in developed lands. These areas will be classified as developed when services are provided and as more intense development occurs.

Community - Lands where low density development is grouped in existing settlements or will occur in such settlements during the following ten year period and which will not require extensive public services now or in the future. These lands are delineated in cross-hatched rust on the Land Classification Map. They appear in the northern portions of the planning area along U.S. Highway 13 to Ahoskie.

Function and Standards

The community lands will provide for low intensity development opportunities. These areas will primarily provide residential opportunities for permanent residents. Public services and utilities will not be available in these areas at as high a level as in the developed and transitional areas.

Rural - Lands whose highest use is for agriculture, forestry, mining, water supply, etc., based on their natural resources. These lands are depicted in white on the Land Classification Map. Rural areas are characterized by forested or open, low lying lands which would be suited for carefully managed resource utilization programs and as forestry, agriculture or passive recreation.

Function and Standards

Rural lands will provide areas for the long term management of productive resources within the Planning Area. Building construction, residential and related supporting development should occur only on large lots in relatively small clusters on carefully selected sites. Public services and utilities in these areas will be limited to support only those uses which are compatible with the concept of conservative resource utilization. The rural classification will also provide large open areas within the Planning Area to serve as a buffer against incompatible uses of land and to serve as a buffer against incompatible uses of land and to serve future land needs which cannot be anticipated.

Conservation - Fragile, hazard and other lands necessary to maintain a healthy natural environment and necessary to provide for the public health, safety, or welfare. Conservation lands are depicted in Dot Green on the Land Classification Map. These are land areas within the Windsor Planning Area where development must be restricted because of an inherent incapability of the land to support development because of fragility or hazardous conditions or because the natural resources represent a greater value than that of development.

Function and Standards

There is sufficient land suitable for development in the Planning Area to accommodate projected and desirable growth without infringing upon areas which are unsuited for development. The classification of conservation lands will direct development away from areas which cannot support intensive development, where public services are not and should not be made available, and direct it instead to more tolerant areas where services can be supplied more economically. These areas are also designated to identify characteristics which represent a potential hazard to development such as flood and erosion. These hazard factors increase the public and private cost required to support development.

PROJECTED POPULATION GROWTH ALLOCATIONS

Projected population allocations to the various land classifications reflect local desires for economic and social development. Local and county residents feel that industrial growth with supporting economic and social activity is the crucial factor in halting county population losses. Windsor, being the county seat and center of economic activity, is expected to capture much of this growth. In keeping with local desires, residential growth in transitional areas within the town is considered priority.

Residents are aware that as transitional lands within the town are developed, additional residential development pressures will occur in the extraterritorial area. To this extent, community lands in the northern portion, and transitional areas in the eastern and southern portions of the Planning Area (excluding industrial transitional lands) will provide additional residential growth areas. The Industrial Park, classified as Transitional, will provide only industrial development.

GROSS POPULATION DENSITIES

This plan recognizes the importance of population density allocations in Windsor's Land Development Plan. By classifying land and allocating population densities the local government can more efficiently budget and plan community facilities such as water and sewer systems, roads, etc. The Planning Area's Land Classification System depicted by Map 7 is consistent with local desires and reflects local conditions.

Windsor is expected to increase from its present 2,300 to 2,642 by year 1985. This represents an increase of 342 people. The following are projected population densities in the Transition, Community, and Rural land classes: Transition-300; Community-30; and Rural-12.

Transition areas will accommodate approximately three people per acre on approximately 96 acres. More than 96 acres of transition land is shown on the Land Classification Map because industrial growth areas are included. In addition, two existing communities, the San Souci Community located in the eastern portion of the Study area, and the South Windsor Community located in the southern portion of the Study Area, are classified Transitional. Both areas meet the "Community" classification description with one exception--poor soils that pose severe limitations for development. Windsor's recent Housing and Community Development application shows plans for water and sewer extensions in the San Souci Community. Water and sewer extensions will eliminate an existing health problem. Additional, residential development is not being encouraged in the San Souci Community. The South Windsor Water Association presently received municipal water but no sewer. This area is not expected to accommodate any residential growth, but it is expected to develop industrially. Water and sewer is presently available in this area.

In conclusion, if population projections are realized, there are enough lands classified to accommodate Windsor's projected 10 year growth.

LAND CLASSIFICATION MAP
(See Pocket Maps In Back)

POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

SECTION SEVEN

POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

Legislative goals of the Coastal Area Management Act of 1974 address preservation and conservation of natural areas. The Act further provides that local land use plans give special attention to the protection and appropriate development of Areas of Environmental Concern (AEC).¹⁷ In addition, the Coastal Resources Commission directs local government to consider as interim AEC those categories and descriptions which are included in the guidelines.

Only two of the AEC categorical areas, Areas Subject to Public Rights, Estuarine and River Erodible Areas are applicable to the Windsor Planning Area. However, there is a natural hazard area, the Cashie River Flood Plain.¹⁸

AREAS SUBJECT TO PUBLIC RIGHTS

PUBLIC TRUST NAVIGABLE WATERS

State Guidelines for Local Planning under CAMA define navigable waters as "capable of being navigated in its natural condition by the ordinary modes of navigation including modes of navigation used for recreational purposes. The natural condition of a body of water for purposes of determining navigability shall be the condition of the body of water at mean high water or ordinary high water as the case may be, and the condition of the body of water without man-made obstructions and without temporary natural obstructions. Temporary natural conditions such as water level fluctuation and temporary natural obstructions which do not permanently or totally prevent navigation do not make an otherwise navigable stream navigable."¹⁹

¹⁷ State Guidelines for Local Planning in the Coastal Area Under the Coastal Area Management Act of 1974 (1975), p. 44.

¹⁸ "Appropriate surrounding land use of public trust navigable waters" are addressed in the Guidelines. The Cashie waters' surrounding lands lie within the river flood plain. Although not considered an AEC, the appropriate land uses and limitations of public trust waters and flood plain areas are similar. Floodplain limitations are discussed on pages 81-84.

¹⁹ Ibid., p. 66 (revised 8/8/75).

The Cashie River is public trust water. It runs approximately 4.8 miles through the Planning Area.

In edict of the stated policy objective, to preserve and manage the public trust waters so as to safeguard and perpetuate their biological, economic and aesthetic value, the guidelines mandate appropriate uses. "Any land use which interferes with the public rights of navigation, or other public trust rights, which the public may be found to have in these waters, shall not be allowed. The development of navigational channels, the use of bulkheads to prevent erosion, and the building of piers or wharfs are examples of land uses appropriate within public trust waters provided that such land uses will not be detrimental to the biological and physical functions and public trust rights. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit soils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are generally considered incompatible with the management of public trust waters."²⁰ These suggested appropriate land uses are essential to future development along the designated public trust waters in and around the Town of Windsor.

NATURAL HAZARD AREAS

Estuarine and River Erodible Areas

Estuarine and River Erodible Areas are considered to be that area extending from the mean water level or the mean high water level along the estuary sounds and rivers. As applicable to the Windsor Planning Area these areas are the Cashie River areas and its tributaries.

In edict of the stated policy objective, to insure that development occurring within these areas is compatible with the dynamic nature of the erodible lands thus minimizing the likelihood of significant loss of property, the following appropriate uses are mandated.

²⁰Ibid., p. 66 (revised 8/8/75).

"Appropriate land uses shall be those consistent with the above policy objective. Permanent or substantial residential, commercial, institutional or industrial structures are not appropriate uses in estuarine and sound and river erodible areas unless stabilization has been achieved along the affected reach. Recreational, rural and conservation activities represent appropriate land uses in those erodible areas..."²¹ It is imperative that future development in these areas (river erodible areas) adhere to the above policy.

²¹ Ibid., pp. 71-72 (revised 8/8/75).

SUMMARY

SECTION EIGHT

MANNER OF DATA ASSEMBLY, ANALYSIS, AND STATEMENT OF MAJOR CONCLUSIONS

An attempt was made to utilize all existing federal, state, county, and local plans relevant to the Windsor Planning Area. However, as true with most towns under 2,500 population, detailed data was not available in these existing plans. Usually, broad planning documents mildly refer to small planning units while concentrating detailed data on a regional, SMSA or county level. Thus, a complete data gathering and analysis process was initiated beginning with an area-wide identification of needs survey.

Through surveys and public meetings citizens identified the following problems and issues confronting the Windsor community: street improvements, beautification /vacant lot and abandoned houses, lack of recreation facilities and opportunities, lack of adequate fire and police facilities, lack of low and moderate income housing, limited downtown parking, drainage, lack of municipal sewer in all areas of town, lack of educational and cultural programs, lack of medical care and facilities, lack of industrial development, and garbage collection improvements.

After identifying the major land use issues and problems, alternatives and different courses of action to meet Windsor's needs were explored. Again, with citizen input, the following long-range goals were formulated from the March, 1975 survey and from follow-up meetings held to discuss survey results.

ENVIRONMENT

Goal: Promote the preservation and management of natural features of the environment in order to safeguard against adverse effects on safety, health and welfare.

HOUSING

Goal: To provide an environment in which every resident of the Planning Area may have the opportunity to secure adequate, decent, safe and sanitary housing.

SOCIAL, RECREATIONAL AND CULTURAL

Goal: To promote and develop various recreational, educational and cultural programs for all ages and income socio-economic groups.

TRANSPORTATION

Goal: To provide a functional and attractive street system in the Windsor Planning Area.

ECONOMIC

Goal: To encourage the improvement of the planning area as a place of trade and manufacturing.

GOVERNMENTAL SERVICES

Goal: To provide the most cost effective and efficient means of administering governmental services.

With phase one complete the actual writing of the Land Use Plan began. To this extent, demographic and economic data was compiled and analyzed from the U.S. Census of Population and Housing, previous planning documents, etc. Findings were compared with local area knowledge and with planning theory, principles and practices. The following major conclusions are the results of this process.

LAND DEVELOPMENT

Windsor has adequate land for future land needs. In addition to the under-developed character of extraterritorial lands, suitable developable lands are also found in town. Poor soil conditions pose a major constraint on development in the Windsor Planning Area. Generally, area soils have severe water tables and a severe percolation rate. Future development will greatly depend upon municipal water and sewer.

HOUSING

Windsor continues to have areas of substandard housing, especially in the low income area located in the east and northeastern areas of the town. As a result, blighted conditions continue taking the form of narrow, unpaved streets, mixed land uses, and improper drainage. With no public housing units in Windsor, many low and moderate income residents will continue to live in substantial housing.

ECONOMY

Windsor's basic economic activities revolve predominantly around farming and forestry, and to a lesser extent, manufacturing. Twelve firms in Windsor have a total employment of 469. In 1969, the U. S. Census reported an average of \$1,875 of income for each person in Windsor.

Windsor has served as a regional economic center since its early history. Economic conditions are projected to increase as regional improvements in housing, medical service, etc. take place. Perhaps recent installation of water and sewer lines to the Industrial Park is a crude indicator of potential economic activity in the area.

POPULATION

Today, Windsor has an estimated population of 2,300. The 1970 Census indicated that Windsor contained 2,199 people, an increase of 386 people since 1960. Consolidation of Bertie Town, inward--county migration, and annexations have accounted for Windsor's continued growth.

Windsor is expected to experience slight growth over the next ten (10) years (1985). An overwhelming majority of the area residents feel that Windsor should grow, but not rapidly. Windsor is seen as a small progressive town with enough development to support its existing population. (See Tables 22 and 23).

EXISTING LAND USE

Mixed industrial and residential uses pose significant land use compatibility problems. Severe problems of pollution, noise, unattractiveness, safety, and residential traffic congestion could develop as a result of such mixed land uses.

Scattered commercial land uses are developing along South Granville Street, and in Sterlingworth Street and Highway 13 By-Pass vicinity. Caution should be taken in these areas as development occurs to protect these communities from strip development.

The Industrial Park is considered the most suitable area for industrial development. Industries should be encouraged to locate here. Windsor has one potential area of Environmental Concern: the Cashie River. It has contributed to the development of Windsor and its people. The Cashie River and its adjacent lands warrant future land use protection and planning.

COMMUNITY FACILITIES

The future development and demand for community facilities is important to any municipality due to the capital expenditures necessary to provide such services.

Water - Windsor has had a steady increase in water consumption over the past years. This increase is expected to continue. As additional industries locate in the area additional wells and elevated storage will be required to meet their demands.

Sewer - The new 1.150 mgd secondary treatment plant which began operation in September, 1975, will provide adequate waste treatment facilities for the duration of this planning period.

FUTURE LAND USE

Windsor was one of the two Bertie County towns that experienced growth during the 1960-70 decade. Windsor and Windsor Township are projected to remain the most populous urban areas in Bertie County. This town-county relationship is taken into account in the WINDSOR LAND CLASSIFICATION SYSTEM.

Map 7 shows the location and distribution of the Land Classification System as applied to the Planning Area. They are as follows:

Developed

Lands classified as Developed are mainly shown within Windsor's Town limits. Other Developed lands are shown off of Highway 13/17 south (Industrial Park Road Entrance). This area is primarily industrially developed. The Bertie County Land Use Plan delineates these areas in the same manner.

Transition

Transitional lands are shown in four general locations: (1) within town limits (2) Sans Souci Road Community (eastern portion of planning area), (3) Industrial Park area and (4) South Windsor Community (across from Industrial Park Entrance). Town and county Transitional land classifications are compatible.

Community

Lands in this category are shown in the northern (along Highway 13 to Ahoskie) and eastern (along Highway 17 to Edenton) portions of the Windsor Planning Area. On the county map lands in this category are the same.

Rural

In the Windsor Plan the majority of rural lands are in the one mile area. Similarly, in the county plan these lands are classified as rural.

Conservation

Windsor's conservation lands, the Cashie River waters and floodplain, are located predominantly in the one mile area. Other conservation lands consist of several small fragile areas within town that are unsuitable for development. That portion of the Cashie Golf and Country Club that is located within the Planning Area is also classified as conservation. The county plan shows the same areas as being conservation.

PLAN IMPLEMENTATION

The Land Use Plan, as set forth in this document, constitutes guiding policies for the Windsor Town Commission, the Planning Board, Town Administrator, and all other concerned departments and agencies within the Study Area. If these bodies pursue the objectives of this Plan and if they insist on basing development policies on this Plan, the goals set forth herein might be realized. To insure that the policies established within the Land Use Plan are followed, it is suggested that the Town utilize certain legal powers to bring about plan effectuation. Certain programs and ordinances will have to be prepared and implemented if the Town is to have a continuing planning program that reflects Town Policy and orderly growth. The Land Use Plan, as well as the various programs and ordinances developed to implement it, must be accepted and supported by the citizens of the Study Area and adopted by the Town Commission. Unless this support is obtained, the incentive to implement the Land Use Plan may be absent and in all probability, the planning effort will be wasted. The importance of utilizing the Plan in the daily decision-making process of the area cannot be over emphasized, for unless the Plan receives this type of acceptance, it cannot be totally effective. Therefore, the first recommended official action to be taken by the Town Commission is the adoption of the Land Use Plan as Town Policy. After this action is taken the following legal implementary tools should be considered:

Zoning Ordinance

Windsor is in the process of reviewing and adopting a zoning ordinance. When adopted, the Zoning Ordinance will be the primary legal implementary tool of the Land Use Plan in Windsor. The Zoning Ordinance should be utilized to ensure that the various land uses of the Study Area are properly situated in relation to one another, providing adequate space for each type of development. It involves the simple division of land into designated districts of differing uses and allows for the control of development density in each area, so that property can be adequately serviced by such governmental facilities as streets, schools, recreation facilities, utility systems, and other public services. This directs new growth into appropriate areas and protects existing properties by preventing the mixing of incompatible uses which can depreciate property values and damage the overall environmental quality of the Study Area. In addition, the Zoning Ordinance should attempt to carry out the various recommendations and goals outlined in this Land Use Plan. Conversely, the Land Use Plan must be utilized by local officials in making decisions concerning future zoning changes. All too often, zoning changes have been made because no comprehensive planning policy has been available upon which to base directions. This Plan provides such a rational basis. Changes in the Zoning Ordinance should be weighed very heavily if in conflict with the concepts and recommendations of this Plan.

Subdivision Regulations

Windsor Subdivision Regulations are another method of implementing the concepts of the Land Use Plan. Subdivision regulations control the total internal design of new residential areas to insure that such developments are properly and efficiently planned. Subdivision control enables a jurisdiction to guide new development by setting minimum standards of street design and construction by controlling the shape of lots, and by determining what improvements in the form of utilities and drainage shall be required. A developer is required to submit a plat for approval to the agent of the local jurisdiction anytime the subdivision of land is to occur. Before the plat is approved, it should be reviewed by the local highway engineer, health official, and Planning Board. In reviewing the submitted plat, the town should determine

whether the proposed streets and their alignment generally conform to those proposed in the Plan and to existing streets. This process insures that the developer of new areas will provide streets that will be placed where they will function in the best possible manner. A subdivision control ordinance is a very essential part of the total planning process whereby orderly growth occurs within the Town.

Housing - Related Codes

The purpose of housing-related codes is to protect the health, safety, and welfare of individuals in the Study Area by establishing minimum standards for all types of structures. Housing-related codes include the following: building codes, housing codes, electrical codes, plumbing codes, gas codes and fire codes. In addition to the proposed zoning and existing Subdivision Regulations mentioned above, housing codes can be used to establish certain types of construction standards. It is further recommended herewith that the Town inventory and evaluate its existing housing-related codes and if found necessary, take appropriate steps in improving and/or drafting additional housing implementing tools.

Sediment and Erosion Control Ordinances

The adoption of a sediment and erosion control ordinance would provide the legal means by which the water quality of the Cashie River can be protected from sediment pollution. Removal of vegetative cover should be controlled, thereby preventing erosion of the soil and resulting sedimentation of the area's historic water body, the Cashie. As the area develops, and if large scale removal of vegetation is allowed, the disturbed soils should be stabilized by planting temporary vegetative cover or by some other soil protective measure. Such ordinances normally designate the local Soil and Water conservation District as a reviewing agency; thus providing technical assistance to the Town for minimizing soil erosion and stream sedimentation.

Capital Improvements Programs

As stated previously, the key to the success of any plan is implementation. The most thorough and technically correct plan is of no value unless implemented. An additional tool which is readily available to local government for the implementation of plans, especially a land use plan, is the development of, and adherence to, a comprehensive Capital Improvements Budget. Such a document would provide planning and

long range guidance for capital improvements expenditures. These expenditures would be coordinated with, and reflect the recommendations of adopted town plans. The Capital Improvements Program would integrate the recommendations of all plans for capital improvements and provide an order of priorities for fiscal programming. Therefore, it is recommended that a five-year Interim Capital Improvements Program be prepared by the Town for fiscal year 1977 (July 1, 1976 - June 30, 1977).

The initial and subsequent Capital Improvements Program should be thoroughly reviewed every year to insure its coordination with functional plans to be prepared. In addition, the updated and expanded Capital Improvements Program should drop the first fiscal year and add an additional fiscal year schedule for fiscal management. As with the interim program, the updated program should rely heavily upon input from each of the Town Departments.

The preparation and annual update of a five-year Capital Improvements Program will provide the Town with a specific program for capital expenditures which will aid the Town's elected officials in the day-to-day decision-making process. In addition, long-range guidance will be provided the Town's administration through the structuring of priorities for capital improvements expenditures.

The probably impact of the preparation of such a program will be to improve the provision of facilities and services to the citizens of the Windsor Planning Area by establishing priorities which will insure that the most needed capital improvements will receive priority attention. Through the adoption and implementation of the Capital Improvements Program, much of this plan may be implemented.

Historic and Open Space Easements

Final implementory tools worthy of consideration are historic and open space easements. These are legal agreements between a landowner and a State Agency in which the landowner promises to protect the essential character of his property, at his own expense, while still using it for daily agricultural, residential, and certain other restricted purposes. Because easements are perpetual and are binding on all future owners of the particular historic or scenic property, they do provide certain benefits as follows: protection of the property from destructive change; preservation of property for the enjoyment of future generations at no acquisition or maintenance costs to the State; stabilization or lowering of real estate taxes on the property, as it can no longer be developed and consequently has a lower fair market value; and qualification of the property as a charitable deduction for federal income tax purposes.

Easements do not, unless specified, give the right of public access, thus protecting the property for the use of the owners. If an individual owns historic or scenic properties and desires to offer an historic or open space easement on such, he will receive assistance from one of the following State Agencies responsible for accepting and administering easements: North Carolina Department of Cultural Resources; Division of Archives and History; and, the North Carolina Bureau of Outdoor Recreation.

Employment of a Full-Time Planning Staff

The hiring of a planning staff is another tool by which the community can implement its Land Use Plan. Such personnel would provide the town with the expertise upon which to base decisions regarding the orderly development of the town. In addition, the planning staff would provide assistance in the decision-making process revolving around all ordinance enforcement.

Public Participation

Decisions concerning the improvement, growth, and process of the Windsor Study Area must be made in a framework which provides for participation by all citizens in order to have broad support, and thereby to be effective. The need for involvement of the citizenry cannot be understated. This Land Use Plan has been prepared in such a manner that it was based on and responsive to a set of goals which reflect not only professionally determined findings of needs, but most important, the needs and desires of the Windsor Planning Area as seen by its residents. These needs and desires were obtained through a Town Improvement Survey, conducted during March of 1975, by the Windsor Citizen Advisory Development Committee. This survey along with various group meetings was a major effort of the WCADC and Planning Board to solicit citizen opinion regarding problems of the Study Area. The survey alone provided valuable input in preparing this Land Use Plan, as well as identifying areas of concern regarding daily activities. Therefore, it is recommended that a Town Improvement or similar survey be conducted annually, in order that all Town Departments may keep abreast of problems and attitudes regarding these problems within the Study Area. This type of public participation will provide supplemental data to existing mechanisms

for public participation. At present, the primary method residents use to voice an opinion is public hearings and/or Planning and Town Commission meetings. It behooves not only the Planning Board, but all Town Departments, to be aware of all citizen needs and to respond to those needs. The survey is one method of obtaining the views of all.

Continual Updating of the Land Use Plan

As previously stated, the necessity to revise and update the information and data contained herein is recognized. It would be illogical to assume that changing conditions within the Study Area would not have an effect on Land Use, since changes have occurred in the past have led directly to the current land use problems. Therefore, it is recommended that the data within this Plan be reviewed annually to insure that statistical changes will not cause unrealistic estimates or feasible recommendations to be implemented. As required by the North Carolina Coastal Resources Commission, the Plan should be completely reviewed every five years. The planning process must be reviewed as an ongoing continuing process, to be reviewed and evaluated as time passes. Both the Planning Board and Town Commission, as well as the Town Administrator, must be cognizant of and responsive to, this concept.

APPLICATION OF THE DATA TO THE PLAN'S FORMULATION

In March, 1975 the Windsor Community Development Advisory Committee (WCDAC) conducted a town-wide survey designed to obtain input to the plan's formulation. The survey was distributed and collected by WCDAC members. The findings of the survey identified a wide range of issues, from those directly related to land use issues per se to the more general related to community well-being, but nonetheless, they addressed land use in broad terms. These results formed the basis of the Windsor Land Development Plan. That is, goals were formulated from identified local problems, needs, and issues. Once all the goals were formulated alternatives and priorities were discussed. Different problem finding solutions were "compared" - "analyzed" - "compared" --, etc. The WCDAC and citizen input was of vital importance at this stage. This "analyzing" - "comparing" - process in addition to technical data, local input is the basis by which this document was formulated.

TOWN-COUNTY PLAN RELATIONSHIP

SECTION NINE

RELATIONSHIP DEFINED

The Windsor and Bertie County Plan relationship can be defined as *a coordinated effort through effective land use planning to provide a balanced growth that offers the best affordable working and living environment for all Bertie residents.* This relationship has been part of a continuous process which has taken two forms:

- (1) Complementing goals and objectives, and
- (2) A compatible county-town land classification system.

Both County and Town Plans address similar interest and citizen concerns. The following are specific examples of the Windsor and Bertie County Plan relationship in these areas.

GOVERNMENTAL SERVICES

COUNTY OBJECTIVE: To increase efficiency of local government by coordinating programs and departments.

TOWN OBJECTIVE: To carry out a strong planning effort for future development through cooperative efforts with county, state, and regional agencies.

QUALITY OF LIFE

COUNTY OBJECTIVE: To develop recreational facilities and then programs to utilize these facilities.

TOWN OBJECTIVE: To cooperate with county government in developing recreational facilities.

COUNTY OBJECTIVE: To establish boat ramps on the County's waterways.

TOWN OBJECTIVE: To make better use of the Cashie River for recreational purposes by providing public piers and other open space activities.

ECONOMIC

COUNTY OBJECTIVE: To maintain or increase the present county efforts to recruit industry.

COUNTY OBJECTIVE: To attempt to stop the County population loss by providing job opportunities.

TOWN OBJECTIVE: To encourage the most satisfactory optimum growth and economic development throughout the area by actively participating in attracting new industry into the area.

These are only a few examples of Windsor and Bertie County Plan relationship in terms of complementing objectives. For more specifics the reader is asked to consult the Goals and Objectives Sections of individual plans. In addition, examination of both Land Classification Maps and text will graphically and verbally depict compatibility and relationship of the plan's land classification system.

APPENDIX A

HOUSING

Analysis of Existing Housing Data

There is a need for an adequate supply of sound, safe, and decent housing within the economic means of all citizens. Because of the present economic conditions and increasing land prices, it is becoming increasingly difficult for many persons earning low and moderate incomes to purchase market rate housing (market rate housing is that housing available for purchase and financing at current interest rates). This problem becomes more acute as mortgage interest rates rise, thus making it more difficult for potential homeowners may decide to purchase a home which is less than what they want or need. Unfortunately, many families cannot afford a dwelling unit that is sound, safe, and decent, whether for purchase or rent. This segment of the population is forced to reside in substandard units. To ascertain the extent of the Study Area's housing, the physical aspects associated with housing, e.g., housing conditions, values, etc.; and the social indicators related to housing conditions, e.g., overcrowded living conditions, and household size are examined.

Due to a lack of data availability and limitations the information presented in this part should be reviewed in conjunction with overall county plans.

Within the corporate limits of Windsor, there are approximately 9,090 acres of land, of which 253 acres are developed residential uses. In 1970, 801 year-round housing units existed in Windsor. As Table 1a shows, during the 1960-1970 decade, Windsor registered a +32.1 percent change in housing units reflecting the +21.2 percent population change (see page 13 for factors contributing to 1970 population increase).

Household size and household density are two important social factors to consider in a housing analysis. Moreover, "the adequacy of the housing stock cannot be judged solely by its physical condition. The Bureau of the Census assumes that more than one person per room represents an overcrowded condition."¹ Living under such conditions of crowding often results in increased anxiety and stress for family members, increased health problems, and even a breakdown in normal behavioral patterns. This condition is especially critical for children under 18, since they are forming their behavioral patterns and spend more time in the house than the average adult. Overcrowding conditions probably place even greater mental and physical stress on the elderly. Exact number on elderly overcrowding is not available but it is assumed that the elderly constitute a large percent of the area overcrowding.

Table 2 compares the household size of the state, county, township and town. The average household size in Windsor is 2.83 while the Township has an average size of 3.31 persons per household.

Table 3 shows that 301 or 23.8 percent of total occupied housing in the Windsor Township was overcrowded. For the Windsor Town, 56 or 11.2 percent of its total occupied housing was classified as overcrowded.

The area's worse overcrowding conditions are in the predominantly Black Communities. Over twenty-five (25) percent of Black occupied housing is overcrowded in Windsor Township and compared to 16.6 percent in Windsor (see Table 4).

Although housing value alone is not a determinant of whether or not a structure or dwelling unit is standard or substandard, there is a direct relationship between substandard units and the number of units with a low economic value. Table 5 shows that 39 percent or 165 owner-occupied housing units are classified in the category of less than \$5,000 and \$5,000 to \$9,999. This fact suggests that at least 44 units (valued less than \$5,000) are substandard even though they have all plumbing facilities.

¹ The President's Committee on Urban Housing, A Decent Home (Washington; U.S. Government Printing Office, 1973), p. 44.

Housing units and structures lacking complete plumbing facilities are defined as substandard for the general purpose of this section. A unit is considered lacking complete plumbing facilities when there is not cold piped water inside the house, a flush toilet and bathtub or shower inside the structure for exclusive use of its occupants. As shown on Table ⁶, 110 units, 13.7 percent of all housing, in town lack complete plumbing facilities and 48 of the 110 do not have toilets.

Mobile home living has steadily increased over the past years. With the spiraling costs of homes, mobile homes are serving as major alternatives in fulfilling the housing needs of low and moderate income families. "In 1960 mobile homes composed one percent of the total American housing supply; by 1970 they made up 3 percent. Moreover, in 1973 mobile homes made up more than 20 percent of all housing starts."²

According to 1960 Housing Census figures, there were 16 mobile homes in Windsor town. Today, there are 19 mobile homes in town and 42 in the extra-territorial area., a total of 61 in the Windsor Planning Area. Presently, two parks are located both in town and in the extraterritorial area.

As more people buy mobile homes, the demand for park space increases. Nationally, mobile home park shortage is expected to become severe. However, this national trend should not have a direct affect upon the Windsor Planning Area due to the spacial patterns of residential lands in the area and the vacant suitable residential lands. Careful considerations should be taken for future location of mobile home parks in Windsor's Planning Area. For the most part, mobile home parks are located in inconvenient locations away from community services, or in untuitable commercial and industrial developments.

In summary, there is a great demand for better housing in the Windsor Planning Area. With no public housing in the Study Area, the demand is greater among low and moderate income families.

² The Center for Auto Safety, Mobile Homes: The Low-Cost Housing Hoax (New York: Grossman Publishers, 1975), pp 1-2.

TABLE 1 a

HOUSING INVENTORY
Windsor
1960 and 1970

	<u>All Year-Round Housing Units</u>		Change: 1960 - 1970	
	1960	1970	<u>Number</u>	<u>Percent</u>
Windsor	606	801	195	32.1

SOURCE: U.S. Census of Housing, 1960 and 1970.

TABLE 2 a

HOUSEHOLD SIZE

North Carolina, Bertie County, Windsor Township and Windsor
1970

(The average number of persons per household)

<u>Area</u>	<u>Household Size</u>	<u>Black Household Size</u>
North Carolina	3.24	3.93
Bertie County	3.61	4.39
Windsor Township	3.31	3.68
Windsor Town	2.83	3.07

SOURCE: U.S. Census of Population, 1970.

TABLE 3 a

OVERCROWDING
OCCUPIED UNITS WITH 1.01 OR MORE PERSONS PER ROOM

Windsor Township and Town

1970

<u>Area</u>	<u>Total¹ Housing</u>	<u>Total Occupied Housing</u>	<u>Total¹ Overcrowding</u>	<u>Percent of Total Occupied Housing Overcrowding</u>
Windsor Township	2099	1262	301	23.8
Windsor Town	801	498	56	11.2

¹These figures were computed using data from Special Census Summary Tapes.

SOURCE: U.S. Census of Housing, 1970.

TABLE 4 a

BLACK OVERCROWDING
OCCUPIED UNITS WITH 1.01 OR MORE PERSONS PER ROOM
Windsor Township and Windsor Town
1970

<u>Area</u>	<u>All¹ Housing</u>	<u>Total Black Occupied Housing</u>	<u>Total Black Overcrowding</u>	<u>Percent of Total Occupied Housing Overcrowding</u>
Windsor Township	2099	865	231	26.7
Windsor Town	801	216	36	16.6

¹These figures were computed using data available from the First Count Summary Tapes.

SOURCE: U.S. Census of Housing, First Count Summary Tapes, 1970.

TABLE 5 a

OWNER-OCCUPIED UNITS WITH ALL
PLUMBING FACILITIES BY VALUE

Windsor Town

1970

<u>Values</u>	<u>Housing Units</u>
Less than \$5,000	44
\$5,000 - \$9,999	121
\$10,000 - \$14,999	109
\$15,000 - \$19,999	44
\$20,000 - \$24,999	42
\$25,000 - \$34,999	44
\$35,000 - \$49,999	14
\$50,000 or more	7

SOURCE: U.S. Census of Housing, First Count Summary Tapes, 1970.

TABLE 6 a INCOMPLETE PLUMBING FACILITIES
 Windsor Township and Town
 1970

<u>Area</u>	<u>Total Housing Units</u>	<u>Incomplete Plumbing</u>	<u>No Toilet</u>
Windsor Township	2099	668	636
Windsor Town	801	110	48

SOURCE: U.S. Census of Housing, First Count Summary Tapes, 1970.

APPENDIX B

STREAM CLASSIFICATION

STREAM CLASSIFICATION SYSTEM

NAME OF STREAM: Cashie River

DESCRIPTION: From source to a point 1.0 mile up-stream from
Bertie County SR 1500

CLASS: C Sw

The best usage and quality standards applicable to Class C waters are as follows:

- (1) Best usage of waters: Fishing, boating, wading and any other usage except for bathing or as a source of water supply for drinking, culinary or food-processing purposes.
- (2) Conditions related to best usage: The waters will be suitable for fish and wildlife propagation. Also, suitable for boating, wading, and other uses requiring waters of lower quality.
- (3) Quality standards applicable to class C waters.
 - (a) Floating solids; settleable solids; sludge deposits: Only such amounts attributable to sewage, industrial wastes or other wastes as will not, after reasonable opportunity for dilution and mixture of same with the receiving waters, make the waters unsafe or unsuitable for fish and wildlife, or impair the waters for any other best usage established for this class.
 - (b) pH: Shall be normal for the waters in the area, which generally shall range between 6.0 and 8.5, except that swamp waters may have a low of 4.3
 - (c) Dissolve oxygen: Not less than 6.0 mg/l for natural trout waters; 5.0 mg/l for put-and-take trout waters; not less than a daily average of 5.0 mg/l with a minimum of not less than 4.0 mg/l for non-trout waters, except that swamp waters may have lower values if caused by natural conditions.
 - (d) Toxic wastes; oils; deleterious substances; colored or other wastes: Only such amounts, whether alone or in combination with other substances or wastes as will not render the waters injurious to fish and wildlife or adversely affect the palatability of same, or impair the waters for any other best usage established for this class.

- (e) Organisms of coliform group: Fecal coliforms not to exceed a log mean of 1,000/100 ml (MPN or MP count) based upon at least five consecutive samples examined during such period. (Not applicable during or immediately following periods of rainfall).
- (f) Temperature: Not to exceed 5°F. above the natural water temperature, and in no case to exceed 84°F. for mountain and upper piedmont waters and 90°F. for lower piedmont and coastal plain waters. The temperature of natural trout waters shall not be significantly increased due to the discharge of heated liquids and shall not exceed 68°F.; however, the temperature of put-and-take trout waters may be increased by as much as 3°F. but the maximum may not exceed 70°F.

SOURCE: N. C. Department of Natural and Economic Resources, Division of Environmental Management.

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